DOCUMENT RESUME

ED 171 200 **HE 011 274**

AUTHOR	Ryan, John W., Ed.
TITLE	Changing Patterns in Graduate Education. Proceedings of the Eighteenth Annual Meeting. Council of Graduate Schools in the United States.
INSTITUTION	Council of Graduate Schools in the U.S., Washington, D.C.
PUB DATE	1 Dec 78
NOTE	300p.
AVAILABLE FROM	Council of Graduate Schools in the United States, One Dupont Circle, Washington, DC 20036
EDRS PRICE	MF01/PC12 Plus Postage.
DESCRIPTORS	Admission Criteria; *Affirmative Action; *Aptitude Tests; College Admission; College Deans; Court Cases; Creativity; Educational Assessment; *Foreign Students; *Graduate Study; Higher Education; Humanities; *Interinstitutional Cooperation; *International Education; Masters Degrees; Research; Research Projects
IDENTIFIERS	Bakke v Regents of University of California; Constitutions (Documents); *Council of Graduate Schools; Graduate Record Examinations; Masters Programs

ABSTRACT

Changing patterns in graduate education were addressed at a meeting of the Council of Graduate Schools (CGS) in the United States. Topics of the conference included: opportunities and change in graduate education, interinstitutional cooperation in graduate programs for professionals, the future of graduate study in the humanities, decision-making in the dean's office, student-related legal problems of the academic dean, creativity and the creative climate in graduate preparation for careers, assessment of creativity in scientific problem-solving, the use of graduate record examination (GRE) scores in graduate admissions, the validity of GRE test scores, the analytical score of the GRE aptitude test, graduate education for international students, the impact of foreign students on graduate education from a Canadian perspective, interassociational activities of the Council of Graduate Schools within the field of international education, the future involvement of the Council of Graduate Schools in international education, a defense of affirmative action in graduate and professional programs, the vital role of research in graduate education, quality assessment in master's programs, implications of the Bakke case for graduate admissions, training program for graduate teaching assistants, and adapting curriculum and degree requirements for international students. The report of the CGS/GREB 1978-79 Survey of Graduate Enrollment, Part 1, is appended along with the CGS constitution and a list of member institutions. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED171200

Proceedings of the Eighteenth Annual Meeting

COUNCIL OF GRADUATE SCHOOLS IN THE UNITED STATES

THEME

CHANGING PATTERNS IN GRADUATE EDUCATION

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Council of Graduate Schools in the U.S.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM

HE 011 274

SAN DIEGO, CALIFORNIA
November 29 - December 1, 1978
TOWN & COUNTRY HOTEL

OFFICERS AND EXECUTIVE COMMITTEE—1978

DONALD J. WHITE (Chairman)
Boston College
J. CHESTER McKEE, JR. (Past Chairman)
Mississippi State University
ROBERT F. KRUH (Chairman-Elect)
Kansas State University
PAUL A. ALBRECHT (1980)
Claremont Graduate School
PHYLLIS PRAY BOBER (1980)
Bryn Mawr College
EARLE L. CANFIELD (1979)
Drake University
BEVERLY CASSARA (1980)
University of the District of Columbia
BERNARD J. DOWNEY (1978)
Villanova University
EASTMAN N. HATCH (1979)
Utah State University
J. KNOX JONES, JR. (1978)
Texas Tech University
OSCAR A. ROGERS, JR. (1979)
Jackson State University
DANIEL J. ZAFFARANO (1978)
Iowa State University
MICHAEL J. PELCZAR, JR. (ex officio)
President CGS

edited by John W. Ryan

Contents

I. *First Plenary Session*

1. Preliminary Remarks
Donald J. White, *Boston College* 1
2. Opportunities and Change in Graduate Education
William D. McElroy, *University of California, San Diego* 2

II. *Concurrent Special Interest Sessions*

A. Interinstitutional Cooperation in Graduate Programs for Professionals
1. **David R. Hager,** *Old Dominion University* 9
2. The Background
Ray Williams, *Office of Naval Training and Education* 18
3. The Process
Fred Villianos, *University of West Florida* 21
4. **William Locke,** *San Diego State University* 23
5. Implications for Future Cooperation Among ETMS Institutions
Alicia Tilley, *Memphis State University* 28
B. The Future of Graduate Study in the Humanities
1. **Michael Hooker,** *The Johns Hopkins University* 30
2. **Dorothy Harrison,** *New York State Education Department* .. 37
C. The Dean's Office—Case Studies in Decision-Making
1. **David L. Wheeler,** *West Texas State University* 40
2. Decisions in a New Territory
James Ballowe, *Bradley University* 41
3. **Irwin C. Lieb,** *University of Texas at Austin* 44

III. *Luncheon*

1. Preliminary Remarks and Presentation of the Gustave O. Arlt Award in the Humanities
Donald J. White, *Boston College* 49
2. **Ellen N. Davis,** *Queens College, City University of New York* .. 50
3. **Gustave O. Arlt,** *President Emeritus, CGS* 50
4. Special Presentation to J. Boyd Page
Charles T. Lester, *Emory University* 52
5. **J. Boyd Page,** *President Emeritus, CGS* 55
6. Special Presentation to Michael J. Pelczar, Jr.
Donald J. White, *Boston College* 55
7. **Michael J. Pelczar, Jr.,** *President, CGS* 56

IV. *Second Plenary Session—Student-Related Legal Problems of the Academic Dean*

Marilyn E. Phelan, *Texas Tech University* 61

V. *Concurrent Special Interest Sessions*

A. Creativity and Graduate Education

1. **John C. Guyon,** *Southern Illinois University, Carbondale* ... 75
2. Creativity and the Creative Climate in Graduate Preparation for Careers
Calvin W. Taylor, *University of Utah* 76
3. Assessment of Creativity in Scientific Problem-Solving
Norman D. Frederiksen, *Educational Testing Service* 92

B. GRE Interpretation and Use-New Forms, New Populations

1. The Use of GRE Scores in Graduate Admissions
Bernard V. Khoury, *Graduate Record Examinations Board* . . 100
2. The Validity of GRE Test Scores: A Review of the Evidence
Mary Jo Clark, *Educational Testing Service* 101
3. The Analytical Score of the GRE Aptitude Test: What We Know Now
Cheryl L. Wild, *Graduate Record Examinations Board* 112

VI. *Third Plenary Session—Graduate Education for International Students—The Changing Pattern*

1. Preliminary Remarks
Daniel J. Zaffarano, *Iowa State University* 119
2. **Cassandra A. Pyle,** *Institute for International Education* 120
3. The Impact of Foreign Students on Graduate Education: A Canadian Perspective
J. Alan Rix, *International Research Center* 131
4. Interassociational Activities of the Council of Graduate Schools Within the Field of International Education
Sanford C. Jameson, *College Board* 134
5. The Future Involvement of the Council of Graduate Schools in International Education
Michael J. Pelczar, Jr., *Council of Graduate Schools* 140

VI. *Fourth Plenary Session—A Defense of Affirmative Action in Graduate and Professional Programs*

1. Preliminary Remarks
Albert W. Spruill, *North Carolina A & T State University* 143
2. **Kenneth S. Tollett,** *Institute for the Study of Educational Policy* . . 144
3. **Geraldine R. Waters,** *Coppin State College* 161

A. Report of the CGS Committee on Graduate Education for Minority Students

1. **Albert C. Yates,** *University of Cincinnati* 165
2. Observations about Placement of Minority Students
Beverly Cassara, *University of the District of Columbia* .. 168

VII. *Fifth Plenary Session—Business Meeting*

1. Chairman's Address
Donald J. White, *Boston College* 171

2. President's Report
   Michael J. Pelczar, Jr., *CGS* ... 174
3. Committee Reports ... 177
4. New Business ... 184

VIII. *Concurrent Special Interest Sessions*

A. The Vital Role of Research in Graduate Education
   1. Preliminary Remarks
      Eric R. Rude, *University of Madison - Madison* ... 187
   2. **John B. Slaughter,** *National Science Foundation* ... 188
   3. **Lloyd M. Benningfield,** *Wichita State University* ... 193
   4. **D. N. Langenberg,** *University of Pennsylvania* ... 197
   5. **C. J. Pings,** *California Institute of Technology* ... 200
   6. NSF Academic Statistics Program
      Susan G. Broyles, *National Science Foundation* ... 201
B. Quality Assessment in Master's Programs
   1. Preliminary Remarks
      Bernard J. Downey, *Villanova University* ... 213
   2. Quality Assessment in Master's Programs: Overview and History
      Mary Jo Clark, *Educational Testing Service* ... 213
   3. Preliminary Report of the Results of the Questionnaire on Master's Program
      Bernard J. Downey, *Villanova University* ... 216
   4. In Search of Quality for the Master's Degree
      Giles T. Brown, *California State University, Fullerton* ... 231

IX. *Concurrent Special Interest Sessions*

A. Implications of the Bakke Case for Graduate Admissions
   1. **Andrew J. Hein,** *University of Minnesota* ... 234
   2. The Aftermath of Bakke: Where Do We Go From Here?
      Frank W. Hale, Jr., *The Ohio State University* ... 239
   3. Graduate Admissions and Affirmation Action: Conditions Before the Bakke Decision
      Allen G. Marr, *University of California, Davis* ... 244
B. Training Program for Graduate Teaching Assistants
   1. **John E. LaTourette,** *Bowling Green State University* ... 248
   2. The Professional Development Program in the Graduate College of Bowling Green State University
      Ronald L. Fadley, *Bowling Green State University* ... 254
   3. A Longitudinal Training Program for Teaching Assistants
      Paul Nash, *Boston University* ... 259
   4. A Half-Day Work Session for Teaching Assistants
      Robert A. Vogel, *Miami University of Ohio* ... 266
C. Adapting Curriculum and Degree Requirements for International Students
   1. **Marvin J. Baron,** *University of California, Berkeley* ... 270

2. **George G. Karas,** *Iowa State University* 270
D. Visas, Financial Support, and Fees
1. **Elmer Baumer,** *The Ohio State University* 271

X. *Report of the CGS/GREB 1978–79 Survey of Graduate Enrollment, Part I* 273

XI. *Officers and Committees for the Year 1978* 283

XII. *Statement of Cash Receipts and Disbursements from January 1, 1978–August 31, 1978* 286

XIII. *Constitution* 289

XIV. *List of Member Institutions* 295

First Plenary Session

Wednesday, November 29, 1978, 9:00 a.m.-10:00 a.m.

GRADUATE SCHOOLS—EXPECTATIONS FOR THEIR FUTURE

Chairman: Donald J. White, *Boston College*
Guest Speaker: William D. McElroy
Chancellor
University of California, San Diego

Donald J. White

To keynote the 18th Annual Meeting, your Executive Committee and its Program Committee under Chairman Bob Kruh, sought a Renaissance person, someone who could speak with credentials and conviction about "Graduate Schools—Expectations for Their Future."

It just has to be a harbinger of great things to come that we found that person right here in San Diego!

Dr. William D. McElroy, our keynoter, is, as Sir Roger DeCoverly would say, "A man of parts." He is at home in the classroom and laboratory, on the pages of outstanding scientific journals, in making and administering national science policy, in testifying in the committee rooms of Congress, in the "hot seat" of university leadership—and on the speaker's platform.

Dr. McElroy's career geographically has spanned the continent. Born in Texas, he graduated from Stanford, took a Master's at Reed College, and then went to Princeton for his Ph.D.

After a brief stint as an N.R.C. Fellow at Stanford, he began teaching biology at Johns Hopkins in 1946. As department chairman between 1956 and 1969, he built one of the best biology programs in the country. In the process, he also became internationally recognized for his research in the area of bioluminescence. To do that, he utilized fireflies in his research. Here his entrepreneurial genius and feel for people showed itself, as he mobilized the children of the area to collect "lightening bugs" for appropriate premiums. Little wonder that he went on, between 1969 and 1971, as the Director of the National Science Foundation, to enlighten congressional committees as to the importance of research, both basic and applied, with singular success. Along the way, he had also fathered the

9

successful Chesapeake Bay Research Consortium, which continues to thrive.

President Teddy Roosevelt once remarked, "The first requisite of a good citizen in this republic is that he shall be able and willing to pull his weight." Dr. McElroy has not only done that; he has set an example for us all. I am pleased to present Dr. William D. McElroy, the Chancellor of the University of California at San Diego.

OPPORTUNITIES AND CHANGE IN GRADUATE EDUCATION

William D. McElroy

I welcome this opportunity to comment on graduate education and to add some thoughts to your general theme of "The Changing Graduate Scene."

Let me begin by saying that, as a former biologist, I am more comfortable in the natural and, to a lesser extent, social sciences than I am in the humanities. On the humanities and graduate education I trust some of you will remember the views of President Giamatti of Yale, who addressed this group at your meeting last year. The advent of federal money and the rise of postdoctoral education has brought a considerable differentiation between graduate education in the sciences and those in the humanities, and I ask you to bear this in mind.

These points I advance are to be used primarily to spur discussion. Providence has fortunately spared me from any special insights into the future, and when you get to the nub of the matter, your guess is as good as mine.

Let me summarize early: Our society—and indeed the world—requires more not less of the highest quality people from our graduate schools. To meet this requirement, we will have to change our patterns somewhat, institute some new programs, and take some modest risks. Still, none of what I will suggest seems all that radical to me. Finally, I am reasonably confident that, despite the inertia of our academically conservative faculty and the glacier-like movement of our academic institutions, we will probably make many corrections in course, and a decade from now one will note considerable differences on the American graduate education scene.

Now let me tell you why I believe this and some of the concepts we might consider.

It is now perfectly obvious to even the dullest chancellor and president—and even, I might add, to an increasing number of faculty—that American higher education has in fact entered what is too often called a new era. Naturally, some perceptive people have been saying this for five years, but finally the reality has seeped into our consciousness. If there was any doubt, Proposition 13 here in California and similar measures in other states finally drove the point home. And I see no need to belabor the obvious facts of demographics and the end of what in retrospect might be called the Golden Age of Higher Education, the age when everything was bigger and better the following year. Higher education generally has fallen or been pushed off the list of high national priorities. And to make matters worse, it seems that society is punishing us, sending us to a collective hell populated by lawyers, auditors, day care mothers and all of the special interest groups that bedevil us. If H. L. Mencken were with us today, he would make great sport of the complexities, the paradoxes, the ironies of our perceived situation. And maybe with his biting sarcasm, we could look at ourselves more closely and see, at times only, a group of sincere, overworked, sometimes frightened, often pompous and cliche ridden university administrators struggling with some very difficult problems.

Let me tell you an anecdote. It's not the least bit humorous. It didn't even happen to me, but was told to me by a colleague. Recently, there was a working dinner meeting involving leading university presidents with what might be called the academic medical establishment and various university staff members assigned to follow federal health legislation. Person after person rose to speak on yet another important and complex issue. The meeting droned on, and it appeared that medical education was beset with more crises and perils than any sane person or medical dean could reasonably cope with. Finally, a wise big ten president stood up and said words to this effect: I appreciate the complexity, the congressional personalities, the intricate relationships and so on. I appreciate the detailed staff work. But this session is too much. I can only deal with a few basic and fundamental concepts. When you relate to those, I am with you. Otherwise, I am lost, for too much complex information will invariably make us overlook the basic principles.

I think the president's advice is generally good. From my perspective, the more complex our world becomes, the more we must look at fundamentals and not be dazzled by the mechanics and myriad details. For this reason I shall mention four of my bedrock beliefs, beliefs that influence my thinking about graduate education today. If they sound like cliches, perhaps they are, but I do not consider them trite.

- First, the future of the United States as a leader of a society providing for its people in an intelligent, just, bountiful, and human way is inextricably connected to our success in the advanced graduate and professional training of our talented people. Further, these same people are a world resource, for our planet can only survive in a worthwhile way through the wise application of knowledge by highly trained people.

11

- Second, the quality of these people and the quality of their knowledge is directly linked to our research universities. If our institutions are healthy—that is, financially stable and intellectually vital—there is no doubt that we can provide both the new knowledge and the trained people.
- Third, a true partnership with the federal government must be established. Universities, and of course this means the graduate schools, are currently in deep trouble with the federal government. Jerome Wiesner, President of MIT, recently made a thoughtful speech on this subject. I urge all of you to read it, for it is the best explanation of the situation I have seen. His first two sentences are also a good summary. "The basic relationship between the federal government and the research community, after nearly three decades of the most fruitful partnership, is floundering. Indeed, it has begun to deteriorate and come apart so badly that we have reached a point of crisis that could see the effectiveness of the nation's major research universities seriously curtailed at a time when it sorely needs to be enhanced."
- Fourth, from a biological point of view, the mind set of "steady state," heard to the point of nausea today, is deadly nonsense. A living organism is only in a steady state when it is dead, when there are no signs of life. The university may not be expanding, some may in fact be contracting, but in either case the university must remain vital and creative. I do not believe I'm a Pollyanna when I maintain that this new era has some interesting possibilities that, if we play our cards right and are lucky to boot, will strengthen graduate education and provide society with the new ideas and talented people so greatly needed.

Now I put before you six points, all framed positively but varying in importance, for consideration from your perspective as leaders of graduate education.

1. We must maintain the quality and the quantity of graduate education and the attendant research. The reasons why are obvious; the how is not so clear. We all know the current job situation and the "clogging" problem it has caused in doctoral education. For graduate education to attract the best people, students must see the reasonable prospect of working in their chosen field. Those of us with large postdoctoral programs observe some of our most brilliant young scholars clinging too long to a laboratory appointment through someone else's research grant or contract. Soon, if not now, our postdoctoral safety valve will be no more. We may be able to use a limited number of postdoctorals in some teaching assistant roles, or resurrect the instructor rank. Offhand, this doesn't seem overly promising because it might damage the financing and teaching experience of graduate students. At least for graduate education in the sciences, we need a "pull" mechanism for the next few years to insure that our

academically oriented Ph.D.'s get started on independent work and unclog the system. At the same time, we have important research work to do, best done in a university setting. My answer to this involves the federal government. I propose that the government fund, with a sunset provision, doctoral level research appointments within the university. Grantees would have more freedom than postdoctorals, and within two or three years most of them would be expected to enter the competitive grant system. Such a program—with a mechanism to prevent bunching at a few universities—might go a long way to provide incentives to young people entering graduate education. Perhaps the President's science advisor could persuade the various agencies to each contribute a sum, then ask the National Academy of Sciences to make awards through a competitive review. Of course, there is the problem of space and I have no ready answer except to say that space is a lesser problem than the one I'm trying to solve.

As for the humanities and some social sciences, I have no answer to the clogging or incentive problem except to develop more non-academic job opportunities. If we can maintain a modicum of broadness in these doctoral programs, I should think the prospects for non-academic employment would be better.

2. We must better articulate our graduate programs with industry and government. We have not developed in this country that close cooperation often seen in some European nations. Perhaps we need university based centers to focus on single industry matters. For example, I see nothing wrong, and much to be gained, with a university center specializing on the problems of the railroad industry. Strengthening the research links with industry and government has many advantages for the nation, and in addition, I believe it would strengthen graduate education by opening new career opportunities and additional research opportunities. The prospects of increased corporate support for graduate students would seem brighter, and in many ways we would reduce the barriers between the university and the high technology corporate sector. The best way to transfer technology is to transfer people.

3. Closely allied with my second point is this: We must create fields, subfields or academic units that mesh more practically with the world of the user of specialized knowledge. In the same speech referred to earlier, Wiesner calls attention to one such area, manufacturing technology. As he points out, the opportunity to make better products less expensively is enormous, and yet manufacturing "is hardly studied at all." Fermentation is another technology that comes to the mind of this biologist. We've practically lost the technique, and clearly this process seems to offer industrial opportunities beyond that of brewing beer. We have all heard—and I think it is largely true—that despite the several hundred

million cars we have produced, we still don't understand some of the fundamental aspects of combustion within the cylinders.

If we are to be more competitive on world markets, then we must marshal the competitive edge given us by the products and processes (especially research) found in our graduate schools. By so doing we expand the opportunities of our graduates, and we give our faculty solid research opportunities with practical benefit.

4. We must revitalize the M.A. degree, especially in those universities which have tended to deemphasize its importance. There seems to be a ready market in most fields for M.A. graduates, and I predict that despite perturbations now and then, the overall trend for this type of talent can only be upward in most fields.

In addition, I believe we need another type of terminal masters, those that will match more directly with needs of industry and government. I have mentioned manufacturing technology as an example. The number of these new degrees should be limited only by bona fide substance, i.e., academic content, and the needs of our society.

Increased enrollments in these types of programs have a clear and positive fiscal implication for the graduate schools. Financial aid, for instance, would probably be minimal, and the increased numbers of graduate students would enable us to maintain our current faculty.

5. In addition to attracting more minorities and women, we should welcome and facilitate an emerging group of new students—those individuals seeking a second career. Our general affluence, the rapidly changing technologies and the opening of new fields will bring an increasing number of middle-aged people back to the university for graduate education as preparation for new careers. Already we see small numbers of these individuals straggling in to us; perhaps if we made it known that we welcomed them, the numbers would increase.

6. Finally, through all of the devices mentioned above—and certainly the list is not exhaustive—we must keep the graduate schools lively and maintaining at least the current level of Ph.D. production. I don't really worry about the brilliant graduate student, for he or she will generally make their way and their mark in spite of what we do or don't do. I am concerned—and here I speak only of the sciences and social sciences—with the more average graduate students. The American research enterprise receives its direction from those few very gifted individuals, but these critical insights are supplemented, developed, confirmed by what might be called the rank and file scientists. American science may be said to rest on a pyramid of scientists, and it is that great mass of scientists below the apex that makes this nation so extraordinarily productive in comparison to other countries. We cannot afford to lose this competitive edge, and for this reason any drastic reduction in Ph.D.'s would, within a

decade, have disastrous national consequences. It should be clear to you that I present no magic solutions, no silver bullet to cure the problems of graduate education. Certainly different faculties and deans will use different strategies, and perhaps a few weak programs will go under. Still, I am confident that the factors are present for adaptation and adjustment to the new conditions. And although our approaches will vary quite naturally, there is one idea, one concept that all of us should pursue with aggressiveness and vigor: It is timely, it is appropriate, for us to tell the people and their representatives about the value of graduate education and the university to our society. The halcyon golden age has lulled us into thinking that those out there setting policies and paying taxes know what we're doing and why it is important. I doubt if this is true. I think as far as this topic is concerned that we are operating on momentum. We have a very strong story to tell, for we have bountiful examples of how investments in graduate education have returned many times their value to the public. The academic research community will have to do this too, and it may well be that graduate education, at least the science portion, should tie in closely with that effort. At any rate, we must start soon to tell the public about the value of graduate education to our economy and well-being. We must also inform them of the importance of the humanities to the social and cultural well-being of society. No university can be a true university without strong graduate programs in the humanities.

Finally and without a summary, let me suggest that we in the university world should stop our anguished public cries of despair and take the initiative. Let's look on the positive side of a different, not worse, situation in graduate education. Let's relish the change, return to our once agile stance where we experimented, innovated, and had fun by developing the finest system of advanced education known to history.

Concurrent Special Interest Sessions

Wednesday, November 29, 1978, 10:15 a.m.–11:45 a.m.

INTER-INSTITUTIONAL COOPERATION IN GRADUATE PROGRAMS FOR PROFESSIONALS

Chairman: David R. Hager, *Old Dominion University*
Ray Williams, *Office of U.S. Naval Education & Training*
Fred Vallianos, *University of West Florida*
William Locke, *San Diego State University*
Alicia Tilley, *Memphis State University*

David R. Hager

During the past year four institutions, Memphis State University, Old Dominion University, San Diego State University and the University of West Florida have participated together with the Office of Naval Education and Training in the development of an inter-institutional agreement that will provide a means to offer a master's level curriculum to naval officers assigned educational and training management responsibilities. The product of these negotiations is an inter-institutional agreement that has been approved by the officials and governing boards of each of the institutions and is ready for implementation. A copy of the agreement is enclosed for information purposes.

The agreement is a result of the interaction of the following factors: the Navy's interest in developing competencies necessary for personnel assigned to positions in education and training through graduate programs offered by quality institutions that are located near major training installations; the Navy's interest in providing education opportunities for their officers in the subspecialty that is compatable with normal constraints of their profession; and the desire of the universities to meet educational needs of the military student that will provide a reasonable alternative to the navy campus for achievement program and assures quality standards and conforms to general practices in graduate education.

The agreement provides that participating institutions design and offer an emphasis in educational training in management within an existing graduate program. The emphasis reflects competencies identified by the Navy post-graduate school as necessary for that particular professional subspecialty. In the case of the participants, such an emphasis or concentration has been designed and will be offered under currently authorized degree lines in educational administration or individualized studies graduate programs. The programs at each institution brought together courses from education, business management, management information systems, computer science and in some cases urban studies to develop a curriculum that met the objectives established for the program and the competencies required of professionals in the field. The program of study, in most cases, did not require the initiation of new courses, but was developed from existing instructional resources. It was agreed that military oriented competencies would be the responsibility of the Navy and would be provided by either a short training correspondence or some other mode of self based instruction. Essentially there was a division of labor established, where the universities would be responsible for providing the academic part of the program in education management and related areas and the Navy provide specialized training appropriate to the military officer and his or her specific role.

An important feature of the agreement is that the military student will be able to begin his or her graduate program at one of the participating institutions and continue it at another consortium member, with a minimum loss of forward progress toward the completion of the degree requirements. This is possible with the provision that the participants have agreed to, that they will accept up to one-half of the credit hours for the degree in transfer and the prior agreement on the acceptance of courses designated by each of the institutions to fill the competency requirements established for this emphasis.

In addition, the participating institutions have agreed that admissions requirements of each will apply and be honored by the participant in the case of transfer students. The agreement also establishes that minimum length of residency and coursework the student must complete in the sponsoring department at the institution where the degree will be conferred. The students are required to take a minimum of 6 credit hours or two courses within the department that has responsibility for the degree. In all other instances the usual policies and procedures of the institution where the student is currently attending apply.

Old Dominion University's activities related to the development of the agreement and the degree emphasis area have been prepared in close cooperation and consultation with the chairman and faculty the Educational Leadership Services Department, the director of the graduate program in educational administration, and the Dean of the School of Education. Coordination and negotiation have been the responsibility of the Dean of Graduate Studies. The agreement has been endorsed by the Graduate Studies Committee of the University Senate. The Committee recommended Old Dominion's participation in the program. In addition, the agreement has been approved by the Dean of Graduate Studies, the Vice-President for Academic Affairs, the President and appropriate lay governing board. The pattern of development and approval of the agreement has been similar at all participating institutions. All of the participants have completed the process.

The ETMS Inter-Institutional Agreement is significant for the participating universities for the following reasons. First, it enables them to respond to an identified educational need of the military community in their service areas.

Second, the agreement provides a reasonable alternative to non-residency and open-ended educational programs like the Navy Campus for Achievement.

Third, the proposal conforms to some of the participating institutions, including Old Dominion University, earlier initiatives which sought the development of a consortium of institutions located near major naval installations that would cooperate in offering undergraduate and graduate programs to meet the special needs and constraints of military personnel. Such an arrangement would be based on full faith in and credit to the work taken at one of the participants, and confidence in the maintenance of quality standards by the cooperating institutions. The present agreement is patterned on that model.

Fourth, the arrangement provides a vehicle for a relatively unique experiment in graduate education, namely, a cooperative venture among widely separated but similar public institutions that is designed to deliver a degree program based upon defined competencies. It is possible that positive results of the activity controlled by the agreement will establish a basis for expanding the scope of cooperation among the participants to include other compatible degree programs and broaden the types of students eligible to include enlisted military personnel, dependents, and civilian employees. The experience may also provide a more general model for cooperative arrangements among universities in the country to provide quality education for military personnel.

Finally, the agreement provides a way to meet the competition by out-of-state institutions for the military student. Old Dominion University and the other participants have been challenged by out-of-state institutions that offer degree programs of varying quality, but are keyed to the specific needs and problems of the military student. The agreement is a way to meet the needs of this student while maintaining standards of quality, institutional regulations, and accepted practices of graduate education.

EDUCATION AND TRAINING MANAGEMENT SUBSPECIALITY INTER-INSTITUTIONAL AGREEMENT

PURPOSE: To provide active duty Navy officers with opportunities for graduate education at the master's level in accordance with the objectives of the Navy's Education and Training Management Subspeciality program (NTMS). This agreement may serve as a basis from which other educational programs for military personnel and/or their dependents can be developed.

PARTICIPANTS: Institutions of higher education who are cooperating in offering this program are Memphis State University, Memphis, Tennessee; Old Dominion University, Norfolk, Virginia; San Diego State University, San Diego, California; University of West Florida, Pensacola, Florida (hereafter referred to as participants). Participants agree that additional institutions of higher education may be invited to enter into this agreement with the unanimous approval of the participants.

ADMISSIONS: Admission requirements of each participant will apply to this program and shall be honored by each participant with respect to transfer students.

CURRICULUM: Participants agree to provide a common curriculum which satisfies competency areas as set forth by the Navy for the ETMS program (see Table I). Each participant agrees to accept courses designated for each competency area, identified in Table II, as fulfilling the course requirements for this program. The Navy assumes responsibility for instruction relating to specific competencies pertaining to military matters.

TABLE I
EDUCATION AND TRAINING MANAGEMENT SUSPECIALITY COMPETENCY AREAS

I. Management
II. Navy Education/Training Organization and Operation
III. Planning, Programming and Budgeting System
IV. Principles and Applications of Instructional Systems Development
V. Personnel/Manpower Management Policies and Procedures
VI. Theory of Training/Educational Psychology
VII. Training Research and Development Process, Policies and Procedures
VIII. Applications of Computer Technology to Management and Training
IX. Contract Administration
X. Training Systems, Existing and Conceptual

TABLE II

MEMPHIS STATE UNIVERSITY
Memphis, Tennessee

Courses Satisfying ETMS Objectives

I. *Management*
EDAS 7100: Introduction to Educational Administration
MGMT 7000: Survey of Organization and Management
II. *Navy Education/Training Organization & Operation*
EDAS 7400: Leadership Exploration Seminar
EDAS 7810: Politics and Power in Educational Leadership
MGMT 7422: Seminar in Organizational Theory
III. *Planning Programming & Budgeting*
EDAS 7120: School Finance
ACCT 6540: Governmental Accounting
IV. *ISD for Management & Supervisory Purposes*
EDPS 7151: Adaptive Instructional Models
EDPS 7152: Techniques of Systematic Instructional Development
EDPS 7157: Practicum in Application of Instructional Systems Concepts
EDUC 7303: Utilization of Audio-Visual Media
EDUC 7305: Survey of Communications Media
EDUC 7307: Practicum in Instructional Medium
V. *Personnel/Manpower Management Policies & Procedures*
EDAS 7160: Administration of School Personnel and Negotiations
GUID 7661: Career Guidance in Educational Settings
PSYC 7215: Organizational Psychology
MGMT 6210: Personnel Administration
VI. *Theory of Training/Educational Psychology*
EDPS 7121: Learning Theories Applied to Education
EDPS 7132: Personality Variables in Classroom Teaching
GUID 7581: Theories of Counseling
PSYC 7216: Behavior Management
PSYC 7801: Human Learning and Development
MGMT 6420: Human Relations in Organizations
VII. *Training Research and Development Process*
EDRS 7521: Introduction to Educational Research
EDRS 7541: Statistical Methods Applied to Education
VIII. *Applications of Computer Technology*
EDRS 7531: Computer as a Research Tool
MGMT 7050: Survey of Data Processing in Business

IX. *Contract Administration*
EDAS 7130: School Business Administration

X. *Training Systems, Existing & Conceptual*
EDAS 8200: The Administration of Instructional Programs and Materials
EDAS 8370: Educational Administration Performance Laboratory

OLD DOMINION UNIVERSITY
Norfolk, Virginia

Courses Satisfying ETMS Objectives

I. *Management*
ELS 539—Management by Objectives
ELS 538—Supervision

II. *Navy Education/Training Organization and Operation*
ELS 580—Educational Leadership and Organizational Theory

III. *Planning Programming and Budgeting Systems*
PADM 571—Public Budgeting Systems

IV. *Instructional Systems Development (ISD) for Management and Supervisory Purposes*
ELS 521—Teaching Media, Materials and Resources
ELS 678—Advanced Seminar in Curriculum

V. *Personnel/Manpower Management Policies and Procedures*
ELS 687—Personnel Administration in Education
US 596—Topics in Urban Studies: Human Resources Management
MGT 512—Personnel Management

VI. *Theory of Training/Educational Psychology*
ELS 592—Adult Education
EFSP 511—Advanced Educational Psychology

VII. *Training Research and Development Process*
ELS 535—Research Methods in Education

VIII. *Applications of Computer Technology*
MIS 560—Computer-Based Management Information Systems

IX. *Contract Administration*
N/A

X. *Training Systems, Existing and Conceptual*
ELS 671—Educational Systems Planning

XI. *Material Management*
N/A

SAN DIEGO STATE UNIVERSITY
San Diego, California

Courses Satisfying ETMS Objectives

- I. *Management*
  - Ed Ad 600: Principles of School Administration
  - Ed Ad 680: Educational Systems & Management
- II. *Navy Education/Training Organization & Operation*
  - BA 769: Seminar in Human Resources Administration
- III. *Planning Programming & Budgeting Systems*
  - PA 650: Seminar in Public Financial Management
- IV. *ISD for Management & Supervisory Purposes*
  - Ed 540: Educational Technology
- V. *Personnel/Manpower Management Policies & Procedures*
  - Ed Ad 720: Seminar in School District Personnel Management
  - BA 769: Seminar in Human Resources Administration
- VI. *Theory of Training/Educational Psychology*
  - Ed 593: Workshop in Adult Education
  - Ed 686: Advanced Educational Psychology
- VII. *Training Research and Development Process*
  - Ed 690: Procedures of Investigation and Report
  - BA 673: Seminar in Organizational Development
- VIII. *Applications of Computer Technology*
  - BA 609: Computer Programming and Systems Analysis
- IX. *Contract Administration*
  - BA 611: Behavior in Organizations
- X. *Training Systems, Existing & Conceptual*
  - Ed 660: Advanced Educational Psychology

UNIVERSITY OF WEST FLORIDA
Pensacola, Florida

Courses Satisfying ETMS Objectives

- I. *Management*
  - MAN 5934: Modern Organizational Theory
  - EDA 6061: Educational Organization and Administration
- II. *Navy Education/Training Organization & Operation*
  - EDS 6050: Principles of Supervision
  - EDA 6222: Personnel Administration

III. *Planning Programming & Budgeting Systems*
   EDA 6240: School Finance
   FIN 6931: Public Finance and Budgeting
IV. *ISD for Management & Supervisory Purposes*
   ESE 5217: Communication and Curriculum Design
   EDG 5250: Curriculum Development I
V. *Personnel/Manpower Management Policies & Procedures*
   MAN 6156: Management of Human Resources
   EDA 6222: Personnel Administration
VI. *Theory of Training/Educational Psychology*
   ADE 5081: Principles of Adult Education
   PCO 6528: Vocational Psychology
VII. *Training Research and Development Process*
   EDF 5481: Educational Research
VIII. *Applications of Computer Technology*
   CNM 4300: Operations Research
   CIS 5041: Informal Storage and Retrieval
IX. *Contract Administration*
   N/A
X. *Training Systems, Existing & Conceptual*
   CNM 4300: Operations Research
   EOP 5055: Advanced Educational Psychology
   EAB 5725: Operant Behavior and Programmed Learning

TRANSFER OF CREDIT: Participants agree to accept in transfer from other participants up to one-half of the credits required for this degree. Participants further agree that no grades less than B will be accepted in transfer.

DEGREE REQUIREMENTS: The degree will be awarded by the institution at which the student completes the majority of the required course work for this program. All students will be required to take a minimum of 6 semester hours or 2 courses within the sponsoring academic department. Participants agree that the student shall meet the requirements of the institution granting the degree with respect to the terminal experience (i.e. comprehensive exam, thesis, project, etc.). The period of time in which the degree program must be completed will be determined by the participant granting the degree with the provision that every consideration will be given for extension in the event the student's work is interrupted by military assignments.

INSTITUTIONAL REGULATIONS: Admission to a participating institution shall carry the obligation on the part of the student to comply with all academic requirements, standards and university regulations. (e.g., course prerequisites, tuition and fees, continuance, etc.)

ACCREDITATION: The degree program offered by participants under this agreement is accredited as part of each participant's regional and professional accreditation and certification.

EVALUATION: The Navy will undertake to develop and conduct an on-going product evaluation of this program. Participants will conduct an annual program evaluation.

STUDENT ADVISEMENT: Participants shall designate the office or individual responsible for the academic advisement of the students enrolled in this program.

MAINTENANCE AND TRANSFER OF RECORDS: Participants agree to provide information on transferring students including transcripts, test data, competency completion check-lists, and other pertinent information requested by the receiving participant. Participants agree to comply with provisions of the privacy act in conveying student information.

PROGRAM COORDINATION: The Navy will assume responsibility for general coordination and participants will designate the office or individual responsible for local coordination and liaison.

ADVERTISEMENT: The Navy will assume the responsibility for advertisement and promotion of this program.

This agreement will become effective on the date indicated below for an initial period of 3 years with a review prior to the date of its expiration. There will be no modification of this agreement without the unanimous concurrence of the participants. Participants have the right to withdraw from this agreement at the end of an academic year upon written notice to all participants and the Navy 60 days prior to the date of their withdrawal. Participants withdrawing from this agreement will permit students to complete the degree under the provisions of this agreement.

Billy M. Jones, President
Memphis State University

H. Trevor Colbourn,
Acting President
San Diego State University

Alfred B. Rollins, Jr.,
President
Old Dominion University

James A. Robinson,
President
University of West Florida

James B. Wilson, Chief
Naval Education and Training

Effective Date

The E.T.M.S. Inter-Institutional Agreement

THE BACKGROUND

Ray Williams

Today's naval officers are engaged in many varied areas of specialization identified by designator codes. For an unrestricted line officer, designators donate surface, special, submarine, and air warfare specialities. The restricted line and staff corps specialities are identified by designators to define the basic support mission of these communities.

Certain billets requiring additional qualifications beyond those indicated by a designator code are further identified by subspeciality codes. These codes define the field of application and additional education, experience and training qualifications needed to satisfy special requirements.

The officer subspeciality system is an integrated manpower, personnel and education management system designed to develop the specialized skills and knowledge necessary to satisfy specific navy billet functions. The development of educational processes, programs, and packages for the subspecialities is a function of the Chief of Naval Education and Training.

The newest subspeciality available to a naval officer is the Education and Training Management Subspeciality (ETMS), which is designated subspeciality code 0037. The purpose of the ETMS program is to develop a corps of professional officer managers who will spend their shore duty tours in education and training billets.

"Management" is the key for the officer holding this subspeciality. His preparation is not tailored to teaching but toward management of the navy's education and training programs, supported by a knowledge of educational technology. Management requires knowledge of finance, manpower, and logistics. The ETMS program also requires a broad knowledge of educational psychology, education and training technology, education and training research and development, existing and conceptual training systems and applications of computers to training.

This new subspeciality provides officers with a challenge. Each year training becomes more demanding and sophisticated. As an example, since 1960, training required for 16 technical rates aboard new destroyers has increased from 810 manweeks to 4670 manweeks. A similar comparison can be made with training requirements for aviation and submarine billets.

The functions to be performed by these subspeciality officers are:

- Supervision and administration of training programs

- Design and improvement of training programs.
- Improvement of methods and quality of instruction.

The officers whose skills are to be developed for this program are to be the leaders of the naval education and training community, commencing about 1980 and increasingly so as their influence and seniority spreads. Thus, the intent for the first several years is to develop leadership for the period from 1980 to 2000.

Over 500 officer billets in the naval education and training command have been coded for the management subspeciality. Many of these are identified as requiring education at the masters degree level and require as a minimum that the incumbent provide recommendations and possible courses of action to commanders responsible for training and education management, including the preparation of policy and guidance direction. He or she must also possess the capability to perform those management functions associated with training programs. In keeping with the navy policies for sea and shore rotation and with the occasional necessary assignments outside an officers subspeciality, we find that we must have approximately 2.7 times the number of officers prepared for this ETMS as the number of billets.

In determining the education required for the officers to be assigned the ETMS subspeciality, we examined the knowledges and skills that he or she would require in the performance of the job. These were identified as:

1. Knowledge of basic management principles.
2. Knowledge of education/training organization and operation.
3. Understanding of the planning, programming, and budgeting system.
4. Understanding of the principles and applications of instructional systems development in order to effectively manage and supervise instructional systems design and development.
5. Knowledge of personnel/manpower management policies and procedures.
6. Basic knowledge of the theory of training/education psychology.
7. Basic knowledge of the training research and development process, policies, and procedures.
8. Basic understanding of the applications of computer technology to management/training.
9. A basic knowledge of contract administration.
10. Knowledge of existing and conceptual training systems.

Since approximately 70 percent of the officers requiring these skills were located in the general areas of Norfolk, San Diego, Memphis and Pensacola we were of course vitally interested in programs available in these areas.

The major dilemma of navy graduate education is essentially a function of decreased input capability at a time when the subspeciality billet base is remaining relatively constant, with a potential for expansion as a result of escalating advances in technology, and a rapidly decreasing inventory of officers educated to the requisite level necessary to exploit these advances. In 1973 the limit imposed by the Congress on the number of billets that the navy could have in graduate level education in all fields was 1500. In 1979 that limit has been reduced to 900.

Preparation for the education and training management subspeciality is not a full time or fully funded program, due to the non-availability of resources. The officers undertake their courses as additional tasks to their full time assignment and at their own expense or utilization of their own GI Bill entitlement. They are a dedicated group of officers.

For the purpose of effective personnel management, the navy often must order an officer to sea or to a different shore location after he initiates his graduate study. It is important to the officer and the navy that he be able to continue his study at his next shore assignment.

Since the transfer of graduate credits is normally severely limited, the Chief of Naval Education and Training is highly interested in an ETMS inter-institutional agreement to meet this need.

The E.T.M.S. Inter-Institutional Agreement

THE PROCESS

Fred Villianos

The University of West Florida entered discussions with representatives of the Navy concerning prospects for a graduate degree program in Education and Training Management during the Summer of 1976. These discussions resulted in a management option, within an existing Educational Leadership Program, that included course electives in disciplines such as management, economics, systems science, and psychology. This program option provided the conceptual base for the Education and Training Management Subspecialty (ETMS) program.

The process by which the inter-institutional agreement was developed can be subsumed under several phases. The initial phase of the process consisted of defining a curriculum for the preparation of navy educational managers in accordance with certain predetermined objectives (skills and competencies).

The Navy decided to approach the university community in order to determine whether a cooperative venture among universities and with the navy could evolve that would satisfy the reqirements of the ETMS and alleviate the problem of credit transfer for naval personnel who would most likely be transferred to other stations prior to the completion of their program at any one university.

The second phase of the process, therefore, involved the identification of specific universities located near naval installations where there is a relatively high concentration of prospective ETMS students. The appropriate officials at each university were approached to determine their institution's capability and willingness to engage in a consortium for the delivery of a prescribed program of study—the ETMS.

The third phase of the process included a thorough and diligent review of existing course offerings and programs at those institutions that expressed an interest in the proposed cooperative arrangement. These reviews were undertaken with a view toward analyzing program and course content in terms of the objectives of the ETMS. Reviews were also used to establish an understanding of equivalency with respect to the courses being proposed in support of the program. The interested universities each submitted a list of equivalent courses designating which program objectives would be met by one or more of the courses submitted. In addition, this aspect of the process initiated contact with the department or discipline in which the program would be housed and with the persons who would be responsible for the various support courses.

The representatives of the various universities and the Navy were aware that many issues regarding the curriculum, administration, support, and promotion of an inter-institutional program would have to be addressed before an agreement could be reached. Several areas of institutional concern were identified during the fourth phase of this process. The following questions containing many of these concerns were submitted for deliberation:

1. Who should award the degree?
2. What should the admission requirements be?
3. What role should the navy play and how should specific navy flavoring be provided?
4. What accrediting agencies should be involved and to what degree?
5. What means should be used to advertise the program?
6. What individual state requirements would have to be met?
7. What should be done to assure adequate communication within the consortium?
8. Where should records be maintained?
9. When should the program become operational and what steps should be taken to facilitate implementation?
10. What should be the graduation requirements?

A reaction paper was drafted containing responses to these questions in terms of possible alternatives and specific recommendations. This document served as a catalyst for discussions held at the Naval Air Station in Pensacola, Florida. University and navy representatives reached consensus regarding most of the issues discussed at the Pensacola meeting and reached a tentative agreement pertaining to the amount of transfer credit that would be allowed under the agreement. In addition, the representatives discussed standards for membership (participant status) in the proposed consortium. These standards included the following stipulations:

1. The participants must have a free-standing graduate level program in the area in which the ETMS program would be housed.
2. The program noted above should have a life of two to three years or more to ensure program continuity and future support.
3. Equivalent graduate level course offerings supporting the ETMS should be present at each of the participating universities.
4. Participating universities should have institutional and program approval from the appropriate regional accrediting associations.

Phase five largely consisted of contacting the appropriate committees, councils, and administrative units at each university to assure consultation regarding the ETMS program and the prospects of an inter-institutional agreement, and to secure approval to continue negotiations concerning a cooperative arrangement in accord with the agreements reached at the Pensacola meeting. The individual universities also investigated the legalities of entering into the kind of joint venture that was being proposed to assure compliance with state statutes and with the rules of their respective governing boards.

A meeting was scheduled in San Diego which constituted the sixth phase of the process. The meeting consisted of: (a) refining and clarifying previous commitments, (b) deciding on the parties (participants) to the final agreement, and (c) drafting the agreement.

The seventh and final phase in the process involved: (a) final adjustments to the curriculum of the program, (b) acquiring official approval of the negotiated agreement, and (c) the signing of the agreement.

William P. Locke

After an initial meeting in Pensacola, Florida, to sound out the possibility of developing a cooperative MA program to support the Navy ETMS program, a second meeting of institutional representatives met in San Diego to explore the specific issues and problems and to thrash out a draft agreement.

The Pensacola meeting had produced a tentative conclusion that the invited institutions were interested in exploring the request of the Navy to develop a graduate program for Education/Training naval officers, but it was recognized by all that a careful examination of the specific points of any agreement, would determine the outcome of this enterprise.

Prior to the meeting, it was agreed that only institutions with their own existing departments, full-time faculty, and degree programs in the areas of educational administration and business administration, would participate in this endeavor. This decision, by necessity, eliminated one institution who did not meet the criteria at that time.

After considerable philosophical and legalistic discussion concerning institutional differences and barriers to cooperating in a graduate program, the following topical areas emerged which required resolution if an agreement was to be reached.

Admissions
Curriculum
Transfer of Credit
Degree Requirements
Institutional Regulations
Accreditation
Evaluation
Student Advisement
Maintenance and Transfer of Records
Program Coordination and Advertisement

The purpose of this paper is to review each of these areas briefly, the solutions arrived at, potential difficulties of implementation and to offer several recommendations for other institutions considering such an enterprise.

Admissions

Inasmuch as each institution maintained different requirements for admissions (i.e. grade point average, GRE scores, and possessing a bachelor degree), and since these requirements were reasonably similar for the four institutions, it was decided that a student would satisfy the admission requirements of the institution of original entry. If a transfer became necessary, each participating institution agreed to honor the original institution's admission requirements and not place additional requirements on the student.

Curriculum

Each institution, following the Pensacola meeting, requested faculty in the degree areas to prepare a proposed draft of courses which would satisfy the competency areas established by the Navy for the ETMS program.

Participants agreed that rather than trying to establish a single set of courses, faculty on each campus would assess the competencies and determine their own courses that would meet the curriculum goals of this program. Faculty were asked to review the course descriptions of all institutions and to determine if they would accept them as equivalent to their own courses.

Faculty from the four participating institutions did determine the courses to be offered in this program and they agreed to the courses proposed to satisfy the competency areas by the other participants. A matrix of the selected courses to meet these competency areas was then developed for prospective students, and for academic advisors on each campus.

Transfer of Credit

This area probably constituted more difficulty than any other category, since, in one instance, state legislation set the limit for the amount of graduate credit which could be accepted in transfer. All four institutions did finally agree they would accept up to a maximum of 50 percent of the credits required for this degree, in transfer, from one of the other participating institutions. Additionally, the participants agreed that no grade less than B would be accepted in transfer. San Diego State, which had the difficulty with the state requirements under Title V, submitted the proposal as a pilot external degree program which made it possible to conduct it on a "pilot" basis, and thus allow up to 50 percent of the credit to be accepted in transfer from one of the other participating institutions. The State approved this "pilot" program on the basis that faculty from participating institutions had established the curriculum, and further, they would cooperate in designing the comprehensive examination that would be given to students in this program.

Degree Requirements

Based on the criteria established under transfer of credits, it was recognized that a participating institution might award a degree to a student who had only accomplished 15 of the 30 units required for this program from the degree granting institution. It was decided by the participants that a minimum of 6 semester hours, or two courses, must be accomplished within the sponsoring academic department. Participants also agreed that the student would have to meet the requirements of the institution granting the degree, with respect to the terminal experience. If one institution required a comprehensive exam and a thesis, students in this program at that institution would be required to fulfill those requirements. If another institution required a comprehensive exam and a project, students at that institution would be required to fulfill those requirements. It was agreed also that faculty would assist in the development of the comprehensive exams from the institutions in which the student had participated. For example, if a student had completed 12 units of credit at Old Dominion, and was then transferred to West Florida for the remainder of the program, the faculty at Old Dominion would be asked by the academic coordinator at West Florida to assist in the design of questions on the course work taken at Old Dominion, which would appear in the comprehensive examination given by West Florida. One final point was the period of time in which the student could pursue the degree. In this area, there was variance in the amount of time allowed for a student to complete degree work. Since some of these periods of time were established by state law, it was simply decided that students would have to fulfill the completion dates set by the degree granting institution, with the understanding that every effort and consideration would be made to provide an extension, if that were possible under the law, in the event a student's work was unusually interrupted by military assignments.

Institutional Regulations

No attempt was made to standardize any wording or requirements regarding institutional regulations on such matters as tuition, fees, continuence, etc. All of the participants simply agreed that admission to a participating institution would carry the obligation on the part of the student to meet all academic requirements, standards, and university regulations for that institution. Each time a student transferred to one of the participating institutions, that student would also have to meet those basic academic requirements, standards, and university regulations. Exceptions to this category were those areas already agreed to under the other subtopics.

Accreditation

This area provided no difficulties, since all participants' degree programs were accredited by a regional accrediting association.

Evaluation

Each campus determined they would conduct their own assessment as to the progress of this program on an annual basis, and the Navy agreed to undertake to develop an on-going product evaluation of this program. A vital requirement of the participants was to determine if the students were meeting the objectives of the program. It was felt that follow-up evaluation by the Navy was essential in determining if students completing this program were, in fact, fulfilling the competency areas established by the Navy.

Student Advisement

Recognizing that while the navy student would be integrated into the regular academic program, it would be necessary to provide special academic counseling and advisement for those participating in this cooperative endeavor. Each campus agreed to identify a program coordinator/academic advisor on each campus, in order that prospective students could be directed to them accordingly.

Maintenance and Transfer of Records

It was agreed to by the participants, that each institution would forward information on transferring students to the receiving institution in order to assist them with their advising responsibility. This would include transferring such items as transcripts, test data, competency completion check lists and other pertinent information requested by the receiving institution. With a growing concern over the provisions of the Privacy Act, it was recognized that participants would have to comply with the provisions of that act in conveying student information.

Program Coordination and Advertisement

The general coordination of the program would become the responsibility of the Navy, and participating institutions agreed to designate an individual on each campus to be responsible for local coordination and liaison. Likewise, the Navy assumed responsibility for advertising and promoting this program to all officers carrying the "P" code for this category, as well as to other prospective officers who may eventually be interested in an ETMS career.

The basic agreement by the participating institutions will be effective for a 3 year period, with the opportunity to modify the agreement on the basis of unanimous approval by all participants. Recognizing the possible change of situations on individual campuses, participants do have the right to withdraw from this agreement, but they have agreed to permit students, already in the program to complete the degree under the provisions of this agreement.

Implementation Problems

The possible problems that are likely to be encountered in this unique arrangement, tend to flow from the sub-categories addressed previously. One major area of concern will be whether or not the students are getting an equivalent exposure in the course work that will relate to the common list of competencies established by the navy. While each campus will evaluate their own progress each year, it is unlikely it will be possible to assess the outcome of this concern, until officers graduating from this program have participated in a "post" evaluation experience. It is expected, however, that by faculty remaining actively involved in an ongoing review of the curriculum for this program, and since they will be assisting in the developing of the comprehensive exams, to a great extent, a common body of knowledge should be transmitted to the students. Another potentially difficult area will be to insure that all appropriate records and information are forwarded to each receiving institution. Without timely data from the previous institution, it will be extremely difficult for the new advisor to properly guide students into their portion of the program.

Inasmuch as special courses will not be set-up for students in this program, it is unlikely the number of students will create any "break-even" difficulties for the participating institutions. It is expected that students will simply be integrated into the regular instructional program, and faculty will be encouraged to allow these students to pursue projects, papers, case studies, etc. which have specific relevance to the competency areas the program is attempting to meet. One unknown dimension, of course, is the number of students that will enroll at any one campus. It is estimated that perhaps 1500 to 2000 students may be eligible for this program. However, because of periodic "at sea" assignments, and since this is a voluntary program, navy representatives have expressed the belief it is unlikely a large number of students will enroll on one campus in any one period of time.

In summary, then, it is suggested that the following issues should be carefully reviewed and resolved by institutions considering a similar cooperative arrangement: 1) specifying who will be accepted in the program; 2) admission standards; 3) transfer of credit; 4) design of a common curriculum; 5) all participating faculty being involved on a continuing basis, in curricula review and in developing and administering comprehensive exams; 6) on-going communication between participating institutions; 7) identification of the responsible person/unit for the program on each campus; 8) establishing the degree requirements for the program; 9) developing a record exchange mechanism; 10) determining student advisement will be available on each campus and who will provide it; 11) identifying overall program responsibility; 12) who will advertise the program, and 13) development of an evaluation mechanism that will provide regular assessment data to all participating institutions as to whether or not the program is meeting its objectives.

IMPLICATIONS FOR FUTURE COOPERATION AMONG ETMS INSTITUTIONS

Alicia Tilley

The cooperative ETMS degree program between Memphis State University, Old Dominion University, San Diego State University, and the University of West Florida is primarily the result of the geographic location of the institutions and the flexibility of purpose which permits participation. Further cooperative effort should be based upon the utilization of variations in the offerings of the institutions and the relationship of these factors to the expansion of educational opportunities for both faculty and students at each of the universities.

An examination of programmatic structure indicates that the four institutions offer a variety of graduate programs at the master's and doctoral levels. A number of these programs are unique in that they are not duplicated at another institution in the group. As a product of location and design, three of these universities (Memphis State, Old Dominion, and San Diego State) serve similar student populations. They are located in metropolitan areas and maintain an extensive external program. The administrative structure of the fourth institution (West Florida) is unique in its organization into three units or resident colleges (Alpha, Gamma, and Omega).

Several possible uses of these similarities and differences would seem feasible. The first, an inter-institutional program for faculty development. An exchange of faculty which would allow the individual faculty member to acquire experience in an administrative structure or program not available at the institution at which he is employed. In addition, the exchange of faculty with specialized backgrounds as visiting professors for varying periods of time would expand the offerings of the institution and enhance the background of the faculty member involved.

A second possibility for interaction between the cooperating institutions would be in the area of student development. Intra-institutional practica or internships in designated disciplines would add to the capabilities of students whose educational experiences have been limited to a single institution. Instructorships for doctoral students who have completed course requirements and who are actively engaged in completing a dissertation would augment the training of these individuals.

A final utilization of interaction between the cooperating institutions would be in the area of program development. Concurrent evaluation of the ETMS programs and the evaluation of other institutional offerings might be undertaken. Such a procedure would furnish each institution with knowledgeable evaluating team familiar with the institution, its purposes and programs. In addition to the activity described above, the programs unique to the institutions might serve as a model for another institution planning a program in the same area. Here again, there might be exchange of faculty to facilitate the transfer of information necessary to implement such a program.

These suggestions for future cooperative effort among the institutions presently offering the ETMS program are certainly not confined to the four mentioned on this program. These activities are possible for any group in higher education that possess the vision and flexibility needed for maintaining such a relationship.

A. Master of Arts Degree
MSU in 16 major areas; Old Dominion in 4 major areas; San Diego State in 32 major areas; West Florida in 8 major areas. Some major areas, in the Master of Arts degree, unique to the institution are: (MSU) Individual Studies; (San Diego State) American Studies, Asian Studies, Latin American Studies, and Linguistics.

B. Master of Science Degree
MSU in 26 major areas; Old Dominion in 7 major areas, San Diego State in 7 major areas; West Florida in 4 major areas. Some major areas, in the Master of Science degree, unique to the institution are: (MSU) Industrial Systems Analysis; (Old Dominion) Oceanography, Dental Hygiene; (San Diego State) Aerospace Engineering, Astronomy, Criminal Justice Administration, and Radiological Physics; (West Florida) Aeronautical Systems.

C. Master of Public Administration and Master of Business Administration Degrees
Additional specially designated degrees unique to the institution are: (MSU) Master of City and Regional Planning; (Old Dominion) Master of Urban Studies; (San Diego State) Master of City Planning, Master of Social Work.

D. Doctoral Degrees
MSU, Ph.D. in 6 major areas, Ed.D. in 4 major areas; Old Dominion, Ph.D. in 2 major areas; San Diego State, Ph.D. in 3 major areas. Some major areas unique to the institution include: (MSU) Doctoral of Musical Arts, Doctor of Business Administration; (San Diego State) Doctor of Philosophy in Ecology and Genetics; (Old Dominion) Doctor of Philosophy in Engineering and Oceanography.

THE FUTURE OF GRADUATE STUDY IN THE HUMANITIES

Chairman: Michael Hooker, *The Johns Hopkins University*
Dorothy Harrison, *New York State Education Department*

Michael Hooker

Good mechanics are hard to find. That's probably why my friend Tom is so much in demand, but for all his success at it, engine repair is not what he had in mind when he entered a doctoral program in philosophy. Unfortunately, when he finished his graduate studies all that the future could offer in academe was the promise of a succession of one year jobs, and Tom reluctantly gave up his career aspirations. We all know someone like Tom, or we have heard stories about them, and every year fewer such stories are apocryphal.

For almost a decade supply has exceeded demand for Ph.D.'s., and each year the imbalance worsens. It is my purpose in these remarks to address the current state of Ph.D. production in the humanities. My focus will be mainly on the side of supply; I will argue for a planned reduction in the supply. I proceed by rebutting the major arguments against reduction, and close with some specific recommendations for managing contraction.
close with some specific recommendations for managing contraction.

Any study of this sort should begin with a survey of the current situation. Unfortunately, as you are aware, hard data in this area is hard to come by, but the general picture is well known and easy to paint. The job market for Ph.D.'s has never been as bad as it is at present, and it promises to get worse. In 1968 there were about 2.5 jobs for every Ph.D. on the market, and in four years the market had so completely reversed itself that there were about three Ph.D.'s for every available job. Assuming a reasonably healthy economy, that ratio will hold at least into the early 1980's. Over that period probably only one-third of the 40,000 Ph.D.'s turned out each year will find employment at jobs that demand the level of education they have achieved.

What is a bad situation everywhere is an abysmal one in the humanities. A recent Mellon sponsored study has forecast a surplus by 1990 of 90,000 humanities doctorates. The whole system of recent graduate education was founded on a continually expanding academic market, and now that market threatens to all but dry up. The humanities are especially hard hit by a reduction in demand from the education industry, because traditionally 90% of the new humanities doctorates went into college teaching. Attrition would normally relieve some of the back pressure created by the cessation of growth; however, the professoriate labor pool does not show a normal age distribution. Rapid expansion of programs in the late fifties and sixties, in response to an enormous infusion of federal support and the presence on campus of the baby boom cohort, has created a tenure-protected bulge in the population of professors. The vast majority of college and university faculty are years from retirement, and even those facing retirement are claiming rights under the spirit if not the letter of the Age Discrimination in Employment Act. To make bad matters worse, the best speculation at present is that Congress will soon render unlawful age-coerced retirement altogether.

Even without good statistics for reference, it is obvious that we face a severe imbalance of supply and demand in the market for humanities Ph.D.'s, and it is becoming obvious to many that the human dimension of the problem demands that something be done to assist natural market forces in righting the balance. The question is what to do.

On being faced with the present market conditions of graduate education a normal manufacturing business would respond by shutting down production and laying off workers or by stockpiling inventory. That immediate and dramatic response is not open to education. We cannot stop production, and we cannot store newly produced Ph.D.'s in a warehouse for future use. What we can do is to better control supply by reducing our rate of production, and through careful planning and marketing we can slightly elevate demand. I want to look more closely at reducing the supply by cutting the size and number of our doctoral programs.

There are such strong counterforces to the recommendation for a reduction in Ph.D. supply that my best procedure would be to confront the strongest of those arguments straight on. Considerations against reduction of supply fall into two broad categories: morally based arguments and prudentially based arguments.

Most prominent among the moral arguments is the charge that there is something un-American about denying the opportunity for graduate study to students who are academically qualified and fully apprised of the high risk investment they are making. Cutting off the opportunity of access to higher education among the qualified and informed is limiting their free choice, and that is morally repugnant. Such is the argument and lofty though it sounds, I find it unpersuasive. The argument is unpersuasive for two reasons: it falsely supposes that it is truly possible to inform incoming students of the odds against them, and it falsely supposes that the only costs associated with over-education and under-employment are to the doctoral holders involved. Free choice is a moral good only where it is truly informed and where there are no countervailing considerations that tend to override. I contend that neither condition obtains in this instance.

Speaking first to the question of informed consent, I need only remind you of your own experience. Most of us have discovered the futility of trying to persuade a prospective doctoral candidate of the dismal prospects facing him. You carefully explain that at best one or two in ten of his fellow Ph.D.'s will find academic employment in their chosen field, and you are met with the reply that "Well, some people will get jobs, and I might be one of those people." No one would bet against odds like that at the track, especially with the stakes so high. There must be some explanation for such irrational behavior among otherwise rational people. That explanation lies, I think, in an innocently and almost ubiquitously perpetuated myth which once had considerable currency, viz., that education is the ticket to a secure and rewarding vocation, and thereby to personal fulfillment. The ideal is almost as old as our country, and for years the advice it spawned bore true. I know that the ideal exercised powerful sway over my own perceptions and aspirations, and I suggest that it does also over the present generation of undergraduates. People so imbued with a belief that has been reinforced over and over are not likely to be convinced easily of its falsity. Further, they are not likely to make rational decisions on the basis of that which they are psychologically ill-disposed to believe. The consent of entering doctoral students to undertake the risk of vocational disappointment is not informed; it is made under the shroud of self deception.

My second point of opposition to the "freedom of choice" argument makes reference to utilitarian consequences of there being a highly skilled underemployed sector of the population. The cost of educating very able students for a market that does not exist is not born by the students alone. In the first place the student pays only a small fraction of the cost of his education, whether public or private, but more importantly, when highly able members of the labor pool are underemployed the public pays a greater cost in the underutilization of a valuable national resource. Further, in the case under discussion, full utilization of the talents of many humanities doctorates is unlikely ever to be achieved, and certainly not without considerable loss of productivity from the time required for retraining. We must ask whether the national interest affords the luxury of such inefficient use of our resources, both capital and human. The answer is persuasively, no.

Moral arguments for restricted enrollments cannot be finally dismissed without attention to a close companion of the freedom-of-choice argument. I have relied heavily on considerations of public utility in pressing my opposition, but it might be objected that any utilitarian calculation of the total consequences of tightened enrollment restrictions must weigh also the disappointment of a student whose heart burns with the desire to pursue higher studies in the humanities. I have laid the foundation for a response to this point in suggesting that the student who professes to desire only the pursuit of wisdom without regard to his material circumstances usually covertly holds the hope of securing an academic career. But even if my cynicism is misplaced and the true purist could be found, the present argument commits the fallacy of false alternatives by pretending that intellectual hunger can be satisfied only by pursuit of the doctorate. Many if not most of history's greatest humanists have pursued their studies avocationally. The present structure of graduate education is not ideally facilitative of that kind of study, but it could become so.

In summary, then, I find the moral arguments against enrollment reduction in the humanities to be devoid of persuasive power. In truth the only time I have encountered those arguments, they were offered in conjunction with, and I suspect as a smokescreen for, more compelling and self-interested prudential arguments.

We should turn now to those arguments. There are four that I want to examine and their major premises are these: (1) we can ill afford the loss of revenue that would result from enrollment cutbacks; (2) a critical mass of students is needed to maintain the quality and vitality of graduate departments; (3) the undergraduate educational mission of most universities requires the availability of graduate teaching assistants; and (4) a large and steady production of humanities doctorates is required to fulfill the social mission of the humanities. Let us look at each of these arguments in turn.

As all of you know who have planned for enrollment decline or have suffered unplanned shrinkage of your graduate programs, there are strong economic counterpressures that militate against reductions in enrollment. Most of the overhead cost of running a graduate program does not diminish appreciably when there are fewer students to educate. The costs of buildings, utilities and libraries are largely fixed. Only by cutting whole departments or programs can those costs be considerably reduced, and even then the major investment cost was made initially at the creation of the program. Incremental revenue derived from student's tuition income is far out of proportion to the incremental cost of educating that student. At least that is the way things look on first inspection. On closer look at the humanities, the argument is not so convincing. At most institutions few graduate students pay their own freight. Support for them is most often developed from general funds, training grants, capitation payments, state instruction payrolls, and faculty grants and contracts. Except in those state institutions where a large block of students can be put on the state payroll as instructors and teaching assistants, humanities departments draw from the budget in disproportion to the sciences. The cost/revenue argument may hold slight sway against enrollment cuts in the sciences; it does not do so in the humanities. Humanities students typically do not generate tuition income. There does remain an economic incentive for admitting those students who will come without support from the institution. Not surprisingly, though, my own observation has been that the appeal of such students is often meretricious. The tuition benefit to be derived from them is frequently more than offset by the intellectual drain they impose on program quality.

Let us turn to the prudential argument that concerns the critical role of graduate students in maintaining program quality. The argument may be developed in two directions: by contending that a certain size graduate body is essential to providing the optimum atmosphere for faculty research within a department; and by contending that a certain size graduate body is essential for maintaining the proper pedagogical atmosphere within a department's graduate program. I reject the former claim and I am uncertain regarding the latter. Good faculty research is produced at many colleges that have no graduate programs. Moreover I would expect that the marginal value of having graduate students to work with would decline sharply as one moves away from the top echelon institutions. It is easy to be drained rather than nurtured by working with students who cannot perform at the cutting edge of one's research.

As regards the claim that a critical mass of graduate students is required for the proper educational atmosphere of a department, I can offer a compelling counterexample. Before it was closed for financial reasons, the philosophy department at Rockefeller University was widely recognized as one of the very best departments in the country. Rockefeller accepted only three or four graduate students a year in philosophy and it never had more than twelve or so students in residence. From all appearances those students received excellent educations, and all of them are well placed now in good universities. I should mention that neither did the size of the graduate body seem to affect the scholarly output of Rockefeller's philosophy faculty. Also to be noted in this connection is the fact that at a time when so few students are gaining academic employment after struggling for it so hard, the frustration of expectations can be deadening to the spirit of a departments' students, and that is especially true where there are so many in a department falling victim to the same dismal fate.

As regards the supposed need for graduate students to serve as teaching assistants, I think a good opportunity for alleviating some of the market pressure is being overlooked here. There are a large number of humanities Ph.D.'s now who are working at jobs that are unfulfilling and that do not utilize the training those persons have received. Surely many in that position would love to work as full-time teaching assistants or instructors on term appointment. Given their availability for carrying greater course loads than TA's carry, the economic aspects of the arrangement would work out even to the advantage of the institution, and certainly for the teachers involved it would be a welcome opportunity to reaffiliate with an academic institution.

The final prudential argument I want to consider is vexing, and I want first of all to forestall the possibility of my position being misunderstood. Historically the humanities have fulfilled an exceedingly important social mission, and the importance of that mission is probably greater today than it has been at any earlier time. What distinguishes the humanities and what is one of their defining features is their concern with the appreciation of value in human life. It is awareness of and concern for value that both makes us human and ennobles us. It is the mooring of our sanity and our purpose, and we need constantly to be reminded of it and to be made to reflect on it. That is the function, singly and collectively, of the humanities. Chancellor McElroy this morning has implored us to recognize that our society needs more not less of the highest quality people from our graduate schools. I would argue too that society needs more not less of what it is the function of the humanities to provide. My only misgiving concerns the supposition that need is best to be met by turning out more humanities Ph.D.'s. I think it isn't.

It is not clear to me that the current level of graduate programs in the humanities is needed to enable the discovery, dissemination and preservation of humanistic knowledge. The humanities are unlike the sciences in a very important respect, and that is that the connection between scholarly research in the humanities and the advancement of socially important humanistic wisdom is not so clear as the connection between basic research and technologically useful knowledge in the sciences. Unlike the sciences, the humanities can be furthered, and are furthered all the time, without the machinery of a system of institutionalized research support. It is unduly cynical and exaggerated, but still instructive, to compare some of what is found in today's scholarly journals in the humanities with the products of scholastic research in philosophy during that period. It is one outgrowth of academic professionalism that in the humanities scholarship constantly runs the risk of becoming a self-contained industry which consumes its products and gives little to the world outside itself. I can't help but wonder how that feature or aspect of the current state of the humanities would be affected by a reduction in the industry's size. Skillful pruning of a tree results in its becoming stronger and more robust than before, and a skillfully planned reduction in the size of graduate programs in the humanities may have the same effect. At least the risk of damage resulting from pruning is far less than my opponents would pretend.

On the basis of the foregoing considerations and reflections I would reason that the imbalance of supply and demand for humanities Ph.D.'s requires that strong action be taken to right the imbalance. Because the arguments in opposition to it are unimpelling, I would strongly counsel a reduction in the size of our graduate programs in the humanities, and I will close by offering five specific recommendations to help effect that end. One aim of my suggestions is to enable controlled shrinkage to be followed by a leveling off of enrollments and a strengthening of the overall humanities enterprise in graduate education.

First I would like to see state boards, regional commissions and the rest of us bring to bear pressure to dismantle weak graduate programs, especially those that have sprung up in the last decade. Between 1971 and 1976, after the time that even the most nearsighted could discern our crisis, there were three new Ph.D. programs created in the traditional disciplines for every one cut. Lest is appear that I am ignorant of recent enrollment statistics, let me hasten to acknowledge that graduate enrollments in the humanities are in fact down from earlier levels. Unfortunately the reductions have rarely come in the weak programs, where they are most needed.

My second recommendation is for a reduction in enrollments at the stronger institutions. I have no formula to offer, but I trust the efficacy of decanal wisdom at the institutions in this group. Obviously numerous local and national factors would be involved in a formula for readjusting enrollment levels in a given university's humanities departments. As a minimal rule of thumb I would suggest taking no more students in a given year than the department forecasts that is will be able to place four years hence.

Third, I would recommend that the federal government should guarantee the financial stability and security of humanities programs in the thirty top graduate universities by awarding to those institutions unrestricted grants, guaranteed to be renewed annually for at least seven years. The grants should be sufficiently large to ensure adequate support for humanities faculty, graduate students, and research. Obviously the proposal as I have outlined it is not likely to materialize, but I think we can all agree that without a considerable commitment from the federal government our universities are not likely to survive as we know them, and without a relaxation of government imposed restrictions and a longer commitment to the continuation of specific support programs, we are not likely to prosper as we can and should.

Fourth I would recommend that the private foundations which traditionally have supported higher education should rethink the focus of their support with an aim toward providing basic program, faculty and student assistance. Foundations should be encouraged toward the sustenance of traditional programs at the expense of peripheral and experimental programs. I have never thought that innovation in the humanities was particularly nourishing of quality, and I am now more than ever convinced that all available support needs to be put into traditional and central core programs.

Finally I would recommend that we rethink and redirect graduate programs in the humanities to train students for a broader spectrum of employment. There is every indication that the analytic abilities and character of temperment required for success in scholarly research in the humanities can be fruitfully applied in fields outside academe. We should educate our students in the recognition of that fact and we should begin to market our graduates for this broader field of employment. But now I have moved from attention to supply to talk of increasing demand, and that is the subject of our next speaker.

Dorothy Harrison

One of the most encouraging signs, amid the declining demand for new college teachers, is the discovery of new professional employment opportunities for holders of advanced degrees. An outstanding instance is a program developed that provides business training to persons with humanities doctorates, then puts them together with congenial employers.

The project known as "Careers in Business" was conceived in 1977. It was felt that minds steeped in literature, political science, or ancient languages could grapple with business problems as well as if they had been trained in torts and contracts, Phillips curves, and shadow pricing.

In order to carry out their idea, funding was provided by seven major corporations, the Rockefeller Foundation, and the National Endowment for the Humanities to establish a training program that would introduce fifty individuals, pursuing or holding a Ph.D. in the humanities, to business methods and practices. The New York State Regents agreed to be the official sponsor and the New York University Graduate School of Business was selected as the site for training.

To encourage applicants to consider "Careers in Business," audiences were addressed on a dozen campuses in the fall of 1977. By spring one hundred twenty finalists had been selected. Following interviews with representatives of interested companies, the list was pared to fifty individuals, who were then invited to the tuition-free seven-week session set for the summer.

The group ranged in age from 26 to 45 and consisted of thirty-one men and nineteen women. Half of the group came from Harvard, Yale, Columbia, New York University, Wisconsin, Syracuse, or the New York School for Social Research. The rest were from twenty other institutions, which included Princeton, U.C.L.A., and the Universities of Virginia, Michigan, Texas, Colorado, Indiana and Chicago. The students had completed their advanced studies in English, history, foreign languages and literatures, anthropology, political science, and African culture. Some of those selected had previous administrative or managerial experience. Others could point to a variety of personal accomplishment, from rock-group management to navigating a Naval destroyer.

No sooner had the group settled at New York University than they were plunged into their new disciplines. In the mornings they studied management, accounting, economics, and marketing. Afternoons were given over to statistics, business law, and informal talks with corporation executives about the ambiances of business life. The students, who had once prepared various editions of medieval classics or measured voter behavior in the Southern mountains, were also tutored in how to prepare a business resume and present their strengths in a job interview.

The company executives who served as teachers soon realized that a majority of the group displayed strong managerial potential. As an officer of Bethlehem Steel remarked, "What they might lack in technical courses, they more than compensate for in intelligence, motivation and humility. This is a group that is willing to go out and learn."

Thus, the stereotypes that each had held of the other gradually fell away. The students, many of whom had thought nonacademic jobs to be excessively competitive and unstimulating, found themselves challenged by business problems and absorbed in the shared labors required for solutions. Their teachers, who had feared that holders of doctorates in the humanities would lack a sense of the practical, found instead that they possessed sophisticated analytical abilities.

Before the course ended, the students had received over three-hundred fifty interviews with representatives from two dozen major corporations, including Chase Manhattan Bank, The Bank of New York, Federated Department Stores, Mobil, Combustion Engineering and *Time*, Inc. *Fortune Magazine* hired a Ph.D. in English as a research reporter. Another literature scholar accepted a post at the Metropolitan Life Foundation. Others completing the program went to work in positions ranging from junior account executive at Batton, Barton, Durstine and Osborn to Assistant Production Manager at Maidenform, Inc. Starting salaries averaged $20,000. Of the entire group of fifty, only two concluded that they preferred to return to academe.

One participant's reaction to the program was typical of that of the majority of students. Possessing a doctorate in romance languages, the individual accepted a post as a foreign lending officer at a large commercial bank at the end of her training, then exclaimed: "I've been recycled semantically. I've come to agree with Macaulay that business is making life better in the area that it can make better. It's vital, fast-moving, and important to society. What better reasons for going into it?"

With the prospect of sixty-thousand holders of a humanities doctorate by 1999, who cannot find teaching jobs in their field, "Careers in Business," on its present scale, is making a modest difference. But last year's success story has led us and the corporate sponsors to schedule an identical program for the summer of 1979.

Locating career options outside academia for persons with advanced degrees in the humanities remains a major concern of graduate education in the United States. "Careers in Business" may stimulate graduate schools to provide better, more readily available job information to improve their links with university placement offices, and through internships and other external programs to demonstrate the value of such degrees to a variety of employers.

THE DEAN'S OFFICE—CASE STUDIES IN DECISION-MAKING

Chairman: David L. Wheeler, *West Texas State University*
James Ballowe, *Bradley University*
Albert C. Yates, *University of Cincinnati*
Irwin C. Lieb, *University of Texas at Austin*

David L. Wheeler

Good Morning. Let me extend a welcome to you on behalf of our speakers to this special session on "The Dean's Office—Case Studies in Decision-Making."

The session is the result of a certain amount of dissatisfaction that some of you may share with us. The presentations at many of our professional meetings tend to be either panoramic or telescopic in their point of view and, more often than most of us would admit, not as useful as they could be. As a result, I do not always leave such meetings with something to help me in the administration of our graduate program or in justifying the expense of the trip to the internal auditor or in responding to my wife when she asks with a twinkle, "Well, how did it go, this time?"

While the case study method of problem solving is not new—perhaps even at these meetings—it might provide us with an interesting and provocative change in the usual format. There have been no assigned or suggested topics for this session. Rather each of our speakers has been charged with the responsibility of addressing a specific problem of general interest. The elements of each case study might include but are not limited to (1) a description of the problem, (2) an analysis of the problem and an identification of the data or sources of information available to solve it, (3) a consideration of the various possible solutions to the problem, (4) a description of the process by which the information was applied to the possible solutions and one was selected, and (5) an implementation of the selected solution and the final outcome or current status of the problem.

Our purpose is not so much to focus on the subject matter of each presentation—although we hope that it will be of interest—as it is to analyze the process by which the problem was solved. Thus while the subject matter of the presentation may not be a current issue at your institution or mine, the process by which the particular problem was solved might be applicable to a variety of situations each of us faces most every day. We want to think aloud, to talk through a problem with you. In doing this the goal is to provoke discussion which will challenge the thinking of our speakers as well as to stimulate a critical analysis of our own methods of problem solving.

Now that I have said all this, I am fully prepared, as you should be, for our speakers to exercise that time honored perogative to interpret the charge as they may and to lead us where they might.

DECISIONS IN A NEW TERRITORY

James Ballowe

It turns out that at least two of us decided that decision-making on the part of the graduate dean was best tested in the multidisciplinary territory this year. Such programs at the master's level are relatively late in coming to campuses along the Ohio, the Mississippi, the Illinois, and the Missouri. Last year at the Midwestern Association meeting we found that only a handful of the 150 member institutions had fully implemented programs. That was March of 1978. I chaired an information session on the subject for the usual selfish reasons program planners do such things: a committee at Bradley was seeing the end of an eight-month study of a multidisciplinary program it had come familiarly to call the MLS—for Master of Liberal Studies. Our librarians were not ecstatic about the acronym.

I'm going to turn this brief talk into an analysis, not of multidisciplinary graduate education itself but an analysis of the self that I know as the graduate dean who has decided to explore in a new country. When I answered David Wheeler's inquiry into what I thought might be a title, I suggested "Where Graduate Deans Should Fear to Tread: The Perils of Programming." In retrospect I would change the word *Fear* not to Dread—though the poet in me likes that—but to *Prepare*. Graduate deans generally make or participate in decisions which are about familiar turf: program evaluation; determination of policies, procedures, and standards for admissions, advancement to candidacy, and graduation; curricular modification and elimination; research activity; resource allocation of graduate assistants, fellows, and scholars. Whether they do a few or all of these depends upon how they or graduate education is regarded in the hierarchy of central administration for academic affairs. In short the graduate dean's opportunity to make meaningful decisions—even those traditionally ascribed to the office—is usually determined by the vision of the chief academic officer. (It helps, too, if the CAO is a former graduate dean.) My first three years in the office were in the traditional environment of the graduate dean. But a year and a half ago one of our graduate dean colleagues became Vice President for Academic Affairs at Bradley. With the advent of a new Vice President familiar with and considerate of graduate education, I found my environment for decision-making widening.

Initially, I took the deanship at Bradley because I believed that the institution might fulfill its singular promise of integrating industry, literature, and science better at the graduate level than at the undergraduate where territories have become curiously more isolated from one another. Early on I found that without support from the top a program which could accomplish this would be foolish to pursue. On the regional and national level I learned that in general the graduate dean should live with the role of arbiter of high standards and not flirt with a faculty or curriculum that belonged to the undergraduate units which provided their monetary resources. But last year our Vice President brought both the concept and the central administration support to a multidisciplinary program—a program which in a medium-sized diversified university would inevitably require the graduate dean to convince faculty and fellow deans alike that a tax on their energies and, possibly, resources would be justified by its creation.

The decision to attend to the development of a program became the occasion for a series of others. I want to list them chronologically as a simplistic means of sharing with you some of the eventualities of taking such a journey. Each decision had its occasion and consequences. These follow:

Decision	*Occasion*	*Consequences*
1. To look at concept and design of program.	a. Undeveloped audience with unmet needs for post-baccalaureate education. b. A polytechnic/liberal arts institution espousing integration of knowledge.	Once begun, no turning back. Once entered, this territory closes behind you.
2. To choose a committee of sceptics and to serve actively on it.	Technology and humanities need for representation—all university.	Exchange of ideas on a philosophical level—most rewarding for faculty and the administration.

Decision	Occasion	Consequences
3. To accept a thematic approach.	a. Philosophical position among faculty, C. P. Snow notwithstanding. b. Evaluation by Assoc. of Liberal Studies—not a strong group, but sincere and helpful in comments.	Definition, not universally acceptable, but descriptive of intent of faculty and ultimately intriguing to the community.
4. To solicit faculty and curriculum.	Need for program.	Informed faculty who could criticize program without knowing its total structure.
5. To define standards.	Insistence by faculty that this be a "tough" degree.	Some overkill. But writing and research component built into each class and unconditional admission requirements enforced.
6. To place control of program in the faculty committee rather than Executive Committee of Graduate Faculty.	Committee self-educated to encourage multidisciplinary program and which understands program needs.	Fluidity—encouragement of faculty and departments to participate. At outset, a burden on the office of the dean.
7. To go ahead with course, and to advertise.	The necessary question.	First class—model for MLS population. Seventeen students, ranging from engineers to teachers, from philosophy backgrounds to computer science.
8. To continue in face of unforeseen issues, such as compensation and logistics.	Belated questions for faculty on rate of payment, contingency courses.	Faculty compromised on some issues, administration on others. Belief in program outweighed crucial differences.

Decision *Occasion* *Consequences*

9. To plan for decisions on collegiality, curriculum. faculty, a director, colloquia—the occasions of an ongoing academic program.

The occasions for the decisions arose without my having to create them. An ineluctable momentum propels one up the mountain of exhaustible resources, across rivers widened by erosion thoughtlessly unattended to for years. Without assurance of support from central administration, though, the journey would be simply a fruitless exercise for faculty and dean alike, a journey likely to end in the dean's being up the proverbial river.

What this new territory for decision-making does is require that the graduate dean engage in all-university activities formerly thought to be forbidden—the territorial imperatives of undergraduate academic deans and of continuing education. Of course a dean who does not anticipate the characteristics of the land and its inhabitants (deans of undergraduate programs, continuing education, discipline-oriented undergraduate faculty) will increase the potential for disaster. But the graduate dean can—given the proper central administration support—become an agent for innovation. In doing so, the graduate dean will see his role regarded differently by the university. It will be a role which more nearly complements and extends the opportunities for faculty and students. Whether the program be multidisciplinary or not, curriculum development might well be a principal new territory for the graduate dean of the 1980's.

Irwin C. Lieb

I was intrigued by Dean Wheeler's invitation to join the workshop. He told me that one of the participant's would talk about interdisciplinary graduate programs, that another would speak to multidisciplinary graduate programs, and he suggested that, to add variety to the program, I talk about transdisciplinary studies. The invitation was irresistible; out of the interest of my own academic discipline, I could not avoid an opportunity to talk about the transcendental unity of our apperception of graduate curricula. My remarks, however, will not be Kantian in inspiration, even though they will be very formal.

Graduate education is organized by academic disciplines in the Arts and Sciences, and by the professions in professional schools.

In universitites where the disciplines are of good quality and the faculty is attentive to issues of educational policy, there is, as you know, little sympathy or support for the development of interdisciplinary studies.

(May I note, incidentally, and personally, that the term "interdisciplinary" is likely to mislead us, because it presupposes the separateness and authority of academic disciplines, though their distinctiveness is often owed to historical accident and social coincidence. I would prefer to see the expression "interdisciplinary studies" understood, not as an amalgam of studies in the established disciplines, but as an attempt to construct new disciplines, and I have urged in my own university ways in which I think they can be supported.) It is a condition of university life that the disciplines are sternly established in curricula, in professional publications, in professional organizations, and they they are the routes to promotion and scholarly recognition.

Still, the graduate schools should provide for interdisciplinary studies, in perhaps two ways: (1) in organized interdisciplinary programs and (2) in ad hoc organizations of disciplines. It is the second I want mainly to comment on, but let me begin with a word about the first.

1. Ther are many organized interdisciplinary programs for the master's degree and, in some cases, for the Ph.D. as well. Examples are familiar: American Studies, Asian Studies, Biological Sciences, Comparative Literature, Folklore, Geography, Latin American Studies, and Middle Eastern Studies. Programs of these titles are established in many universities and we all know how quickly they organize for themselves as academic disciplines, complete with professional publications, and formal professional organizations.

There is, in many universities, also a Master's degree in the Humanities. The University of Texas at Austin does not have such a program, mainly because it is not continuous with Ph.D. studies in our university. Though it is the sort of program which is commendably intended, it is not generally seen as a preparation for research and scholarship. In my own university, therefore, and in universities which have a large number of doctoral programs, the Master of Arts in the Humanities is not normally found. Instead, the audience it is intended for is served through programs in continuing education and through graduate study in non-degree candidacy.

Apart from the programs of the sort listed above, The University of Texas, and many large research oriented universities, have no other interdisciplinary master's programs, and none are constituted by us in ad hoc ways. Why!—because master's programs are thought by our faculty to be too short to allow consecutive study, leading to depth and comprehension in several fields.

2. What about the doctorate? Again, there are organized interdisciplinary programs which are near to being disciplinary in character. But to allow flexibility to the organization of studies and to allow for the development of new researches calling upon several disciplines, it seems to me

of great importance to allow and even to encourage interdisciplinary arrangements.

The intellectual and administrative problem in connection with interdisciplinary interests is how to organize them. Our way of organizing them is, in effect, simply to create a new department for each student who is authorized to undertake an interdisciplinary study. How do we do this? Let me set out the steps and stages—you can imagine the alternatives to them which we considered and then set aside.

1. No one is admitted to graduate study at The University of Texas for ad hoc interdisciplinary study leading to the doctorate. All students are admitted to established programs which are authorized to recommend the doctoral degree.

2. In the second or the third year of graduate study, a student, however, may submit to his graduate committee a proposal for a dissertation which, for one or another of several reasons, is not suitably conducted within the alinements of the program's usual requirements.

3. With the approval of the student's graduate committee, after having satisfied its minimum requirements for course work for its degree, a student applies to the Graduate School for the construction of an ad hoc interdisciplinary committee. The application requires the endorsement of the student's department, with the department certifying that it believes the student's proposal is intellectually worthwhile, that it would be good for the student to pursue it, and signalizing that the department is willing to have the student's further course work and dissertation supervised by a committee appointed by the Graduate School.

4. The Office of the Graduate Dean then appoints an ad hoc committee which reviews the course work the student has already taken, and recommends further organized study; it subsequently provides an examination for admission to candidacy, carefully reviews an extended dissertation proposal, and recommends to the Graduate School that the student be admitted to doctoral candidacy and that a dissertation committee be appointed for him or for her.

5. This last committee then supervises the construction of the dissertation, conducts an examination of it, and recommends to the department that the department's degree be awarded to the candidate; the department in turn recommends the award to the Graduate School.

This procedure is, plainly, a hedged and conservative one. It recognizes—as, I suppose, most large universities with many doctoral programs would have to do—the organized disciplines; but it is also, in useful respects, a mechanism for broadening and unsettling those disciplines themselves for the certification of unusual studies, and experience with it has been good.

Again, I want to draw attention to the notion that this mechanism, conservative as it is, seems to be useful in research universities. It might also be of some use in universities with fewer doctoral programs, though those universities have unusual opportunities for the construction of novel interdisciplinary programs.

Presidents of the Council of Graduate Schools in the United States at 18th Annual Meeting, San Diego, California

Gustave O. Arlt
President 1961–1970

J. Boyd Page
President 1970–1978

Michael J. Pelczar, Jr.
President 1978–

Luncheon

Wednesday, November 29, 1978, 12 noon–1:45 p.m.

Presiding: Donald J. White, *Boston College*
Presentation of Gustave O. Arlt Award in the Humanities
Special Presentations: J. Boyd Page, *President Emeritus*, CGS
Michael J. Pelczar, Jr., *President*, CGS

Donald J. White

At the outset of these luncheon ceremonies, I am very pleased to introduce to you our head table guests. They include the current members of the Executive Committee: Bernard J. Downey, Dean of the Graduate School, Villanova University; Beverly Cassara, Dean of the Graduate School, University of the District of Columbia; Earle L. Canfield, Dean of Graduate Studies, Drake University; Eastman N. Hatch, Dean, School of Graduate Studies, Utah State University; Paul A. Albrecht, Dean of Claremont Graduate School; Oscar A. Rogers, Jr., Dean of the Graduate School, Jackson State University; J. Knox Jones, Vice President for Research & Graduate Studies, Texas Tech University; Phyllis Pray Bober, Dean of the Graduate School of Arts & Sciences, Bryn Mawr College; Robert F. Kruh, Chairman-Elect of the Council & Dean of the Graduate School, Kansas State University; Past Chairman, J. Chester McKee, Jr., Vice President for Graduate Studies & Research, Mississippi State University and Daniel J. Zaffarano, Vice President for Research & Graduate Dean, Iowa State University.

Also with us is our new President, D. Michael J. Pelczar, Jr.; our President Emeritus, Dr. J. Boyd Page; and a former Chairman of the Executive Committee, Dr. Charles T. Lester of Emory University.

One of the highlights of the Council's annual meeting is the presentation of the Gustave O. Arlt Award in the Humanities, in honor of the Council's first president, a noted humanist, scholar and administrator.

This year, Dr. Arlt specified the field of archeology, and the award recipient has published a seminal work in that area.

Dr. Ellen N. Davis is currently an Associate Professor of Art History at Queens College of the City University of New York. She is a graduate of the Maryland Institute of Art and of St. John's College in Annapolis. She received her Ph.D. in 1973 from the Institute of Fine Arts of New York University.

Dr. Davis has also edited an impressive work, has been active in the Archeological Association of America since 1964, and has received numerous distinguished awards, including grant support from the National Endowment for the Humanities for her extensive excavation work in Greece and Turkey. She has assembled an impressive bibliography. Its centerpiece, which merited the Arlt Award, is her volume, *The Vapheio Cups and Aegean Gold and Silver Ware*, published in 1977 by Garland Publishing, Inc., of New York and London. As a quondam economist, I may say that in these days her work is tinged with more than humanistic excitement! Indeed, her successful endeavors bridge the humanities, sciences and social sciences.

Horace Greeley once said: "The illusion that times that were are better than those that are has probably pervaded all ages." I suspect that Ellen could tell us something about that. I am especially pleased to present to her now the 7th Annual Gustave O. Arlt Award for her outstanding scholarly work.

Ellen N. Davis

I am very happy and proud for this award, and I wish to thank the Council, Dr. Pelczar and the committee which selected my book. I hope that it is a well deserved recognition. Thank you.

Donald J. White

It is now my distinct pleasure and privilege to introduce you to our founding President, Dr. Gustave O. Arlt, who really needs no introduction to this audience. We are delighted to have him in our midst. He will grace us with a few words and will also announce as customary the sector of the discipline from which next year's awardee will be selected.

Gustave O. Arlt

President Pelczar, Chairman White, ladies and gentlemen of the Executive Committee, friends and colleagues all: It hardly seems possible that this is the seventh time that I have been privileged to address a winner of the humanities award, so generously established in 1971 by the Council of Graduate Schools in the United States. But it must be the seventh time, for in the past six years awards have been made to young scholars in the fields of history, English, linguistics, modern languages, philosophy, and folklore. In each instance, the recipient of the award was a scholar who already had established a record of distinction within the brief period of five years after completion of the doctoral degree. In each instance the book for which the award was made served both as the capstone of an early promise and the cornerstone of a continued career of excellence.

This year's award is in the field of archaeology and goes to Professor Ellen Davis of Queens College of the City University of New York for a book entitled *The Vapheio Cups and Aegean Gold and Silverware*. The committee of experts who made the selection characterize the book as "a pioneering study," and they commend Professor Davis for her acute observation of technical details and the application of technology as a rarely used criterion for the analysis of such objects. For the award and for the high praise that accompanied it, Professor Davis, I congratulate you and express my confidence that your further career will justify this early promise of distinction.

I cannot refrain from expressing my satisfaction that Dr. Davis' research was supported by a grant from the National Endowment for the Humanities. And I remind my colleagues that it was the concerted and sustained effort of the Council of Graduate Schools, the American Council of Learned Societies, and the United Chapters of Phi Beta Kappa that resulted in 1965 in the establishment of the National Foundation on the Arts and Humanities, without which there would be no Endowment for the Humanities and no funds for the support of research and publication. So, Professor Davis, you see that the Council of Graduate Schools was thinking of you and your needs fifteen years ago before you ever heard of the Council.

Finally, I want once more to thank the Council of Graduate Schools for establishing this award, and to thank the committee of the Council that selected the anonymous panel of expert judges, but most of all I want to thank Dean Herbert Weisinger who, for the past seven years, has skillfully and tactfully managed the operation of this competition and has made it successful.

Donald J. White

Dr. Herbert Weisinger has served as chairman of the committee that has overseen the selection of the Arlt Award recipient since the inception of that award. This assignment has been no ordinary committee task. For, as we all know, Dr. Arlt each year has selected a distinct branch of the humanities as the source of the scholarship to be recognized, so that the chairing of the award committee called for a person at once both erudite and ingenious. Dr. Weisinger filled the role magnificently. Now that he is handing on the committee's reins because he has retired from the deanship at Stony Brook, may I ask that we recognize his talents and accomplishments and let our applause be an expression of our gratitude for a job exceptionally well done!

Is there any dean in the audience who has occupied that post for 34 continuous years? I see none. Well, we do have such a dean in our fine organization, Dr. Robert H. Koenker of Ball State University. Not only has he served with distinction as a graduate dean, but as I am sure you know he played a leading role in fostering the development of the Doctor of Arts degree. He has also contributed significantly to the success of the Midwestern Association of Graduate Deans and served as its historian. He will be retiring next June. Although he could not be here because of his wife's unfortunate illness, may I ask that we salute him for his long and distinguished tenure and wish him and Mrs. Koenker much happiness in the years ahead.

This year, after a distinguished career as an award winning soil chemist, outstanding dean at Iowa State University, and as the second president of the Council of Graduate Schools in the United States, Dr. J. Boyd Page decided to retire.

Who could present the most appropriate tribute to Boyd for his significant accomplishments? Many, indeed, but none better than Dr. Charles T. Lester, Vice President for Arts & Sciences at Emory University and former Chairman of the C.G.S. Executive Committee who worked with Boyd for graduate education for many years.

Charlie Lester needs no further introduction to those among you who have been around for the last half dozen years. He was an outstanding chairman of the Council. Just to mention his name brings to mind more than one reminder of his wit and wisdom, for he is no ordinary academic. Of him it may be truly said that entertainment's loss was academia's gain. The wise person who remarked: "The most wasted day of all is that on which we have not laughed" could also have said: "The world needs a few more Charlie Lesters." I am pleased to present him to you now.

Charles T. Lester

Chairman White, members of the Executive Committee, special guests and fellow deans—

When called upon to speak it is pleasant, nay imperative to know to whom you speak.

A midnight call aroused an obstetrician and a harried male voice inquired, "the pains are coming every five minutes what should we do?"

"Is this her first child?" inquired the obstetrician. "Of course not you fool! This is her husband", responded the irate male.

I am aware to whom I'm speaking and I am honored to be asked to speak at this time and place about Boyd Page. However, there is some slight unease inherent in such a venture. What is the right thing to say.

It is somewhat like meeting the widow of a friend and on inquiring about her husband have her say "Oh he's dead and gone to his reward". If you say, "I'm sorry", she may interpret that as meaning you think he's gone to hell. If you say, "I'm glad," it sounds as if you're glad he's dead.

So Boyd we say to you we are glad you're retiring since this is what you want to do. But we are sorry you're retiring because we hate to see you leave as President of the Council of Graduate Schools.

As I look over the present roster of graduate deans, I am conscious of the fact that of the 100 deans who met in Chicago about twenty years ago and organized the Council of Graduate Schools, only President Emeritus Arlt, soon to be President Emeritus Page and I are still associated with the Council of Graduate Schools.

This means that I have known Boyd Page from the beginning of this organization. We've served together for six years on the Executive Committee of the Council. We have served on many other committees and task forces of this organization.

I have had an excellent opportunity to see at first hand what Boyd has done for the Council. First of all let me say, and I believe Boyd's lovely wife, Helen, will agree, that Boyd has worked unceasingly for the Council.

It is said that Boyd, due to travel difficulties, once found himself in a small town in Georgia where he was forced to spend the night in a small hotel. While sitting on the veranda he saw a funeral procession pass and enter a small church next door. With nothing else pressing on his time Boyd strolled down and entered the church.

After the formal service was concluded, the minister invited members of the congregation to stand and say anything they wished about the dear departed friend.

There was a period of silence, whereupon Boyd arose and walked down to the front of the church. He turned and said to the congregation, "I did not know this departed, but while you who did are collecting your thought, I would like to take this opportunity to tell you something about the Council of Graduate Schools in the United States."

Boyd has accomplished many things while serving as President of the Council of Graduate Schools. He has accomplished these with patience, intelligence and good humour.

First of all he has enlarged the membership of the Council of Graduate Schools. This organization now includes all institutions in the United States with any significant graduate program.

Secondly, he has been a steady mediating influence in this organization. We are a diverse constituency with many differences in size, in organization, in institutional objectives and goals.

Boyd has striven to pay attention to the needs, wishes and ambitions of every institution in this organization. He has paid as much attention to a relatively small church related institution as he has to the representative of a mammoth prestige land grant university. He has always sought to inspire us to keep our common purpose in mind.

Thirdly, he has provided leadership and guidance in planning, conducting and reporting a variety of studies focusing on common problems of graduate education. Many of these have been supported by grants from private foundations and government agencies. Among them are: (1) assessment of quality of doctoral programs, (2) cost analysis of graduate programs, (3) assessment of quality in master's programs, (4) alternatives to traditional graduate programs, (5) establishment of guidelines for protecting quality in graduate extension programs, (6) improvement in communication between American and foreign institutions of higher education.

Throughout the vicissitudes of these studies Boyd has sought and secured the active involvement of personnel from member institutions. Deans, financial officers, faculty, admissions officers, students and alumni have all been involved again with a careful eye to see that both geographic and institutional distribution has been adequately considered.

Under Boyd's leadership, the Council's list of publications has been enlarged, updated and revised. The graduate school community has available carefully prepared brochures to help in developing and monitoring standards for the research degrees, Master of Arts, Master of Science and Doctor of Philosophy, as well as a variety of professional degrees at both the master's and doctoral level.

In addition to his other accomplishments Boyd married very well. His lovely wife, Helen, has graced our meetings and supported with her presence and considerable charm all of the social events associated with Executive Committee meetings and Council meetings. I want to say to both of you, Boyd and Helen, how much you have meant to us. I want to thank you in the name of the Council and acknowledge our debt to you.

But speaking personally I want to say more. Helen and Boyd have given me hope and joy and inspiration. Far beyond any call of professional duty or even high standards of civility they have been my friends. From me you deserve special acclamation and I give it to you now with love and appreciation.

Most of you do not know that I write verse. All of you will soon be sorry to find it out. But I offer this tribute in Middle George verse to Boyd Page:

Down in the state of Utah
Was born this mighty man
His name is J. Boyd Page.
He's known throughout the land.

A man of steady purpose
And with a steady will
He will never be forgotten
This man of DuPont Hill.

(I know it's DuPont Circle but I use hill for two reasons. (1) It does seem that there is a slight grade up Connecticut Avenue, and (2) circle is an incredibly difficult word for rhymming)

Oh how he fought and labored
To improve our CGS
And we can now all plainly see
His efforts brought success

His dreams and goals for CGS
Now qualify him as sage
So we say again we all love you,
Our comrade J. Boyd Page.

J. Boyd Page

Thank you Charlie for those kind words. I am especially pleased to have heard them from you.

I guess the Council has been a central part of our lives for much of its history and I have always considered it a privilege to serve. This is particularly so because of the many choice individuals we have been privileged to work with and come to know as true friends. The future of the Council is bright. Your officers and staff are dedicated and hard working. The Council is in good hands.

Finally, may I express our deep appreciation to your officers and through them to all of you for this lovely gift. We will always treasure it. Thanks again.

Donald J. White

I should like to add my thanks, and those of all in the Council of Graduate Schools in the U.S., to those so eloquently expressed by Dr.

Lester, and wish Boyd and Helen much happiness in their new retirement career. Also, I should appreciate it if you, Helen, would stand briefly to receive our richly deserved tribute.

In the few weeks following the appointment of Dr. Pelczar as the President of the Council last summer, the tributes poured in from around the country—from big schools, small schools, government officials, and, most important, from the University of Maryland. We all know the old saying, "A prophet is not without honor, save in his own country."

Mike's reaction to all of this, in my opinion at least, speaks volumes. He said, "You know, Don, I have been talking with my kids about all of this favorable correspondence. And you know what they say? Gee, Dad, don't you think you better quit right now while you seem to be so far ahead?"

Dr. Pelczar and I both had a hearty laugh.

The ability to lead by example is a gift, and Mike Pelczar has it. The tributes were no accident.

You know his accomplishments. I predict they are just the prelude. Teamwork, which has already emerged as the by-word of his administration, holds great promise for the future. To convert problems into opportunities is the challenge to the nation's graduate schools, and I know of no one better qualified to lead that effort than our new President, whom I am privileged to introduce to you now, Dr. Michael J. Pelczar, Jr.

Michael J. Pelczar, Jr.

Mr. Chairman, President Emeritus Arlt, President Emeritus Page, colleagues in CGS, and friends:

I regard the privilege of serving as your President as a very high personal honor. I want to thank you for your expressions of confidence in the choice made by your search committee. You can be assured that I will do my very best to carry out the responsibilities of the office of President of the Council of Graduate Schools in the United States in a manner that will justify your confidence.

Dean White asked me to share with you some of the developments and activities at CGS since I took office. I interpret this to mean "Tell us what you have done with your time." I am glad to do this. However, I wish to preface my remarks with an acknowledgment to Boyd Page and the CGS staff, John Ryan, Mary Jo Leocha and Ann Evans for their superb assistance to me, both before and after taking office. All have provided help, not only generously, but with a most cordial attitude.

Many of you know that the headquarters office of CGS is located at One Dupont Circle; the building is known as the National Center for Higher

Education. Upwards of 35 associations of higher education are officed in this building. However, this eight-story structure is not large enough to accommodate all of the associations of higher education in Washington. Several are located across from the National Center for Higher Education at 11 Dupont Circle; the Association of American Colleges is on nearby "R" Street and the College Board, the new National Association of Independent Colleges and Universities and others are down the street on Massachusetts Avenue.

I mention these associations of higher education because one of my first priorities was to meet with the chief administrative officer of all those groups who relate in some manner to CGS. I have done this. My purpose was to introduce myself as the new President of CGS and to reaffirm the interest, desire and availability of CGS to participate in graduate education issues. To use an old cliche, this was a very rewarding experience—it was an eye-opener in many ways.

My second wave of appointments is with persons in federal agencies. Thus far, I have met with Assistant Secretary of Education, Mary Berry, and others of her staff; Dr. Phillip Handler, President of the National Academy of Sciences; Dr. Richard Atkinson, Director of the National Science Foundation, and several members of the NSF staff (Dr. Phillip Smith, Office of Science and Technology Policy; Dr. Daniel Simone, Deputy Director, Office of Technology Assessment; and several others).

Let me assure you that I am very mindful that a person can burn up all of his time and energy running around meeting people in Washington. However, we judged that it would be a very constructive move to make these contacts in a prompt, concerted manner. I have proceeded accordingly. The schedule is now well in hand. I am confident that it will be rewarding; in fact, we can already report on favorable developments.

I would like to comment briefly on the Council's formal representation or participation with other associations. Beginning with Dr. Arlt's administration, CGS has participated in many on-going committee functions jointly with other organizations. Each of these activities places a commitment upon CGS membership and the staff. Among the activities are:

- The Washington Secretariat for Higher Education;
- Commission on Educational Credit, Higher Educational Panel and the International Advisory Group of the American Council on Education;
- CGS has for many years been an active participant in foreign graduate student education through participation with: the AFGRAD Program, the National Liaison Committee in the State Department, and the Institute of International Education.
- CGS serves on the Advisory Committee of the National Center for Higher Education Management Systems.

64

- Most of you are aware of CGS participation on the Graduate Record Examinations Board.

All of these activities were on-going when I took office.

Since September 1st, a few more have been added—these are associated primarily with governmental or federal relations.

CGS was invited and has accepted the invitation to join a small group made up of representatives from: AAU (Association of American Universities), AGS (Association of Graduate Schools), NASULGC (National Association of State Universities and Land-Grant Colleges), COGR (Committee on Governmental Relations), and the AAMC (Association of American Medical Colleges). This group meets every other Friday. We discuss federal legislation issues, particularly as they may impact upon university research. Decisions are made as to who will take the lead role on important issues.

CGS has also been invited and has joined an ad hoc University Science Committee, made up of approximately thirty or forty university representatives under the chairmanship of Dr. Robert Barlow of Cornell University. This group has monthly meetings at One Dupont Circle. The focus is primarily on science and research.

CGS was recently invited to serve on the Advisory Board of a project (TRENDS 2000) initiated by the Association of American Colleges. The group is chaired by Professor John Dunlop of Harvard University.

There is a new development on the drawing board which I have initiated, and which I think may emerge as a very significant activity of CGS. This development results from meetings I referred to earlier, with persons in various associations and agencies. The suggestion was made that it might be attractive to consider establishing an ad hoc group in Washington to discuss issues in graduate education. It would be made up of ten to fifteen persons (from associations and agencies) who are identified with issues and the future of graduate education. I have discussed this concept with several persons and have received encouragement from them. I presented this idea to the CGS Executive Committee yesterday; they approved. We shall proceed to initiate this activity, which, for the time being, will be called the CGS—Graduate Education Group.

I am sure you recognize that expansion of our activities places additional demands upon our organization—both the CGS membership as well as the Council staff. Along with these changes in activities, the staff has recommended to the Executive Committee that the CGS committee and task force structure be reviewed and that certain modifications be implemented. The Executive Committee has taken action on this matter and, hopefully, will announce results after the February Executive Committee meeting.

There are several other recent developments within the last few months which are of concern to graduate education. These include:

1. The appointment of a Presidential Committee on Foreign Languages and International Studies.
2. The appointment of a National Committee on Research.
3. The call for recommendations for legislation for reauthorization of the Higher Education Act of 1965—most of the visions expire in the next year. Recommendations need to be developed within the next few months.

These will be topics for discussion during our meeting.

My three months' exposure to the Washington scene has reinforced what I suspected earlier; namely, that higher education, *and particularly graduate education,* cannot realistically anticipate any new major support program at this time. Rather, we need to fight hard to hold on to what is now available—to try to prevent further erosion either in terms of *less dollars or more regulations!*

But there is a matter of considerable importance that I wish to share with you. The matter I refer to is the need for the promotion of a well-developed, well-coordinated and well-articulated program for graduate education. Our plan needs to capitalize upon the *great talents,* the *great diversity* and the importance of this diversity in CGS institutions.

Ten years ago CGS met here in the great state of California at the San Francisco Hilton. Dr. Arlt, in his President's report, referred to the dramatic decline in federal support which graduate education had just experienced. He attributed this abrupt "turn around" in part to "a general inability, or even unwillingness, on the part of the academy to communicate with the world that supports it." He continued:

> ". . . Every institution that is engaged in graduate work—from the great multipurpose universities to the small colleges with half a dozen master's degree programs—must demonstrate, not by words but by actions, that graduate education is an essential ingredient in the social and economic structure of the nation . . ."

You will recall that Chancellor McElroy commented upon this same topic in his keynote address to us this morning.

Ladies and gentlemen, I submit that we still need to do a better job in making our case to the public. We lack a well conceived, strongly justified and broadly supported program. I have encountered in my Washington travels such comments as—"graduate education doesn't know what it wants, except that it wants more funding." Dr. Steven Muller, President of the Johns Hopkins University, in a recent article entitled "*A New American University*" starts out by saying: "We are not where we were. That much is obvious on every campus". He continues by saying that we are moving but not yet with "clear purpose, direction or confidence"; and that the American research university yearns for a return to the 1950's and 60's. There is no going back. That is more true, perhaps, for graduate education than for undergraduate education. I repeat, it is my judgment that we need to devote our best talents and considerable effort upon the development of a comprehensive program for graduate education, together with a strong justification that states:

- what we think should be done;
- a recommended scenario for getting it done;
- and to spell out what the consequences of these accomplishments mean to the future economic health and social welfare of the nation.

I am confident that we are equal to this responsibility. It is not an easy task nor one that can be accomplished in any short time span. There is reason to be optimistic. We have what the nation and the world need more of; namely, *higher education!* Dr. Norman Hackerman, President of Rice University, in his talk to the Council of Graduate Schools last year, said: "There is an infinite stockpile of ignorance in the world and although we learn more and more, the stockpile is still infinite". We need to continually increase the national pool of talent to chisel away at this mountain of ignorance. This is society's only feasible hope for improvement.

I conclude with a remark from the summary statement of Dr. Clark Kerr's recent article entitled *"Higher Education: Paradise Lost?":*

> ". . . The further progress of the modern world is *every more dependent* on *ever higher, higher learning"*.

Again, I thank you for the privilege of serving as your President.

Second Plenary Session

Wednesday, November 29, 1978, 2:00 p.m.-3:00 p.m.

STUDENT-RELATED LEGAL PROBLEMS OF THE ACADEMIC DEAN

Chairman: J. Knox Jones, *Texas Tech University*
Marilyn E. Phelan, *Texas Tech University*

Marilyn E. Phelan

An academic dean generally is selected initially for the position on the basis of his or her reputation as a scholar and educator. Often, therefore, a new dean is unprepared to deal with the complicated legal issues that have plagued colleges and universities in recent years. Deans must make numerous decisions regarding students that can result in lawsuits. For example, those relating to admission and retention of students, degree requirements, transfer credits, grade changes, and academic programs and regulations, all involve the status and potential income-producing capabilities of students. If the economic status of a student is adversely affected by a dean's decision, that student may have recourse in the courts. The purpose of this paper is to provide guidance for deans and other administrators in understanding the legal environment in which they must function.

LEGAL STRUCTURE OF HIGHER EDUCATIONAL INSTITUTIONS

Institutions of higher learning are of two categories—public and private. Many institutions are corporations. (A corporation was early defined by the Supreme Court as "an artificial being, invisible, intangible, and existing only in contemplation of law."[1]) Corporations also may be either public or private. It has been said that a private corporation is an association of persons to whom the sovereign has given a franchise to become an artificial, juridical person, with a name of its own, under which it can act and contract.[2] Public corporations are created for public purposes only and the interests and franchises of such corporations are the exclusive property and domain of the government itself. The character of a corporation as public or private is determined by the terms of its charter and the general law under which it was organized, not upon the character of its shareholders or the number of persons engaged in the enterprise.[3] Some educational institutions are unincorporated and are merely established by the state as an agent of the state.

The several states have exercised their residual powers to establish public institutions of higher education. Knowledge of the statutory structure of these institutions is important because of the legal constraints concerning funding, policies, and programs, which may vary from state to state. Some states have given their universities constitutional autonomy, which has served to elevate these universities above manipulation by state legislatures.[4] Regents of universities in these states are given general supervision of university affairs, including exclusive control of funds and appropriations. In those states where colleges and universities are subordinate to the legislature, control of university affairs ultimately lies with the state. This generally includes both control of funds and control of academic programs.

The legal structure of an educational institution becomes relevant also with respect to liability under various civil rights statutes. If an officer or employee of a public institution should unlawfully dismiss a student from an educational program, or should wrongfully refuse to admit a student, he or she may be liable for violation of the student's civil rights. Pursuant to 42 U.S.C., §1983, a person, who, under color of any statute, ordinance, regulation, custom, or usage of any state, deprives another of any rights, privileges, or immunities secured by the Constitution and any federal laws, is liable to the injured party. The Fourteenth Amendment provides that no person shall be deprived by a state government "of life, liberty, or property, without due process of law." It further prohibits a state from denying anyone "equal protection of the law." If an official of a state institution deprives a student of these constitutional guarantees, he or she is acting under color of the state and is subject to liability under 42 U.S.C., §1983. On the other hand, private action generally is immune from restrictions of the Fourteenth Amendment; consequently, action by officers or employees of a private institution would, as a general rule, not amount to state action, or action under color of state law, so as to make the administrator subject to 42 U.S.C., §1983.

STUDENT CONSUMERISM

As early as 1959, the concept of student consumerism was presented to the courts.[5] Columbia University had sued a student to recover $1,000 in tuition fees. The student countersued alleging that the university had represented that it would teach him wisdom, justice, honesty, courage, beauty, and similar virtues and qualities; that it would develop the whole man; and that, because it had failed to do so, it was guilty of misrepresentation, to the student's damage. The student was attempting to establish a tort action in deceit. However, the court found no elements of deceit to be present and held that Columbia University was not guilty of misrepresentation.

In a more recent case, a student sued a community college, again on the theory he had been defrauded.[6] He asserted that he had enrolled in a particular class with the understanding, from representations in the catalogue and statements from his advisor, that certain equipment, which he felt was necessary to teach him the promised level of proficiency, would be available for his use when, in fact, it was not. The student claimed that because of the college's false representations, he was damaged to the extent of $25,000, an amount he would have earned had he been gainfully employed during the school term. The court dismissed the student's complaint stating that method of instruction and course content involve complex judgmental decisions that should be made by college officials and not by judges and juries in tort actions. The court did state, however, that ". . . arguably, a different result might occur if college officials had specifically represented that certain courses included practical training."

Students have not yet been successful in convincing courts that colleges and universities should be liable for failing to provide them with an adequate education. Legal theories providing some basis for lawsuits of this nature are created by analogy from the law of medical malpractice and by application of general principles of tort and contract law.[7] The necessary elements for a tort action in deceit are (1) false representation, (2) knowledge or belief on the part of the person making such representation that it is false, (3) an intention that the other party act thereon, (4) reasonable reliance by the second party in so doing, and (5) resultant damage to the party acting upon the misrepresentation. The contract theory presupposes a contractual relationship between the student and the university when the student pays tuition. Student catalogues and handbooks provide the terms of contract.[8] If the institution fails to produce in accordance with its published statements, it has breached its contract with the student. Further, if policy and procedural statements guarantee that students will be furnished an adequate education, then it can be claimed that the institution has breached its contract when it fails to provide such an education.

To date, students have prevailed against educational institutions only in instances where some specific overt act or omission on the part of the institution occurred, such as when a student has been refused admission or wrongfully dismissed.

Admission Policies

Legal problems regarding admission policies differ for private and public institutions. Both must meet federal requirements that there be no discrimination on the basis of race or national origin.[9] For a public institution, Fourteenth Amendment requirements also apply. However, before a student can establish a violation of due process under the Fourteenth Amendment, he or she must demonstrate a property interest (in this instance, the right to an education). Higher education has been regarded as a fundamental right only in an indirect sense—namely, the position of the relationship of education to success in present American society. It is possible, however, that applicants to a university who meet the stated admission requirements of the institution can demonstrate (on those grounds alone) a property interest.

The question of whether higher education provides a property or liberty interest, protected by the due process clause of the Fourteenth Amendment, has been discussed in several cases, but none has produced a definitive answer. In *Ramos v. Texas Tech University*,[10] a federal district court stated its opinion that a unilateral expectation of admission does not rise to the level of a legitimate claim of entitlement. The court noted that, whereas public school education may be a property right, a student enjoys no right to be admitted to, in this instance, the graduate program at a university. The Supreme Court of the United States, in *University of Missouri v. Horowitz*[11] discussed the question and agreed that, to be entitled to procedural protections of the Fourteenth Amendment, a student must demonstrate a deprivation of either a "liberty" or a "property" interest. However, the Supreme Court evaded a definite answer to the question by stating it need not decide whether the student was deprived of either a liberty or a property interest in that, assuming Ms. Horowitz had such rights, she was awarded as much due process as the Fourteenth Amendment requires. In *Abbariao v. Hamline University School of Law*,[12] the Supreme Court of Minnesota assumed a student's interest in attending a university is a property right protected by the due process clause of the Constitution. In *Cortner v. Baron*,[13] a federal district court stated that ". . . though the right to an education is not among those rights established either expressly or by implication in the United States Constitution, there is a Constitutional right to the equal opportunity to partake of public education offered by a State." The court ruled that those acting under color of state law may not deprive anyone of equal opportunity to receive an education.

Arguments based on Fourteenth Amendment rights generally do not apply to private institutions. There are, however, exceptions to this rule in that a private person's conduct is not always private.[14] Persons seeking to hold officers of private institutions liable under 42 U.S.C., §1983 have contended that performance of the public function of education by itself constitutes "state action." However, the factor most frequently relied on to demonstrate "state action" on the part of an institution has been the presence of governmental financial support. In this context, financial aid must be so substantial as to pervade management of the school as a whole. Courts have been less willing to find that a private institution performs a public function on the basis of indirect kinds of financial aid, such as scholarships and tax exemptions, which frequently are granted on a blanket basis to all colleges and universities.[15] Officials of a private institution can be sued under 42 U.S.C., §1981. In *Runyon v. McCrary*,[16] the Supreme Court of the United States affirmed that section 1981 prohibits racial discrimination in the making and enforcement of private contracts. Justice Stewart, delivering the opinion of the Court, stated that a contractual relationship for educational services is sought when application is made to a school and that such contractual relationship cannot be denied by the school on the basis of race.

Absent discrimination on the basis of race or national origin under 42 U.S.C., §1981, there would seem to be no recovery for a student denied admission to a private institution.[17] In a recent suit under Title IX by a female applicant to a private medical school, a federal court of appeals ruled that the student had no right of action merely because the college might have received state and federal financial assistance, because receipt of such funds does not constitute "state action."[18] The court stated that nexus between the state and the challenged activity must be demonstrated before a court could find requisite "state action" warranting its having jurisdiction. The court further stated that Title IX does not provide a student with a private right of action because of its carefully constructed scheme of administrative enforcement.

For public institutions, it is important to remember that the Constitution does protect the equality of opportunity of persons to attend a college or university. Standards and qualifications for admission can be imposed, but they must be reasonable and must be administered in a uniform and impartial manner. Courts have been reluctant to disturb administrative decisions determined to have no discriminatory motive. This obviously assumes that preferential treatment is not given to certain students. An applicant should be made aware of standards applied and may be informed why he or she failed to meet them when this is the case. Whatever criteria are used, an institution should allow an applicant opportunity to demonstrate that a particular criterion may be inappropriate in assessing his or her qualifications. When a student is rejected on the basis of information submitted by some party other than the student, he or she should be given access to this information and an opportunity for explanation or contradiction.

Whether an institution can take race, national origin, and, in some instances, sex into consideration in affording special treatment to certain persons is another problem. Special treatment along racial lines may be appropriate where previous discrimination has occurred. In other instances, the constitutional issue is whether use of the criterion in question denies equal protection. In the recent case, *University of California v. Bakke*,[19] the Supreme Court recognized that the goal of achieving a diverse student body is sufficiently compelling to justify consideration of race in admission decisions. However, Justice Powell stated that racial and ethnic classifications of any sort are inherently suspect and call for the most exacting judicial scrutiny. The University of California Medical School admitted a prescribed number of minority students; the Court held such a preferential program to be a disregard of individual rights under the Fourteenth Amendment. According to the Court, when a state's distribution of benefits or imposition of burdens hinges on the color of a person's skin or ancestry, any individual adversely affected by such action is entitled to a demonstration that the challenged classification is necessary to promote a substantial state interest.

Retention Policies

Courts have recognized that students paying a fee for enrollment and attendance at an institution of higher learning are vested with certain rights protecting them from unwarranted dismissal. For a private institution, unwarranted dismissal involves a breach of contract on the part of the institution. For public institutions, it also may violate a student's constitutional rights. In this regard, rules differ for dismissal for disciplinary reasons from those for dismissal for academic reasons.

Disciplinary action. Courts have held that tax-supported colleges and universities must give students notice and a hearing before expulsion or suspension for misconduct. In *Dixon v. Alabama State Board of Education*,[20] the Fifth Circuit held due process requirements of notice and hearing are required in disciplinary decisions against students. The Fifth Circuit stated that a "full-dress judicial hearing with right to cross-examine witnesses" is not required, but that at least the rudiments of an adversary proceeding, wherein a student can present his own defense against charges and can produce either oral testimony or written affidavits in his behalf, should be required. According to the Fifth Circuit, adequate notice must be given the student, there must be an opportunity for a hearing, and any disciplinary action taken by the institution must be supported by substantial evidence.

The Fourteenth Amendment requirements undoubtedly go beyond procedural requirements enunciated in the *Dixon* case.[21] In a disciplinary proceeding, the following requirements should be met: (1) the student should be given specific, clear notice in writing of charges against him and the nature of evidence on which the disciplinary proceedings are based; (2) the hearing tribunal must be impartial; (3) any disciplinary action must be based on convincing proof; (4) a student must have the right to hear all evidence against him, including the right to testify, to summon witnesses, and to present evidence on his or her behalf; (5) the student should have a record of the proceedings; (6) the hearing should not be coercive; (7) the student should be entitled to a prompt written notice of the decision; and (8) there must be a student right of appeal. In *Goss v. Lopez*,[22] the Supreme Court stated that a student can be removed immediately from a school where the student's presence presents a danger or threat to persons or property; however, notice and hearing must follow "as soon as practicable."

In a private university, courts can intrude into school disciplinary policies only where the state has a significant involvement beyond granting of state aid or regulation by the state of educational standards.[23] In one case involving a private institution, a statement in the college bulletin provided that a student could not be dismissed without "due process."[24] The court held such a statement did not guarantee the sort of due process applied to actions of tax-supported institutions.

Even though a private institution can be sued for dismissal of a student under the contract theory,[25] a student impliedly agrees not to be guilty of misconduct that would be subversive to the discipline of the college.[26] The implied contractual agreement with a student only obligates the institution to act in good faith and not arbitrarily. Because a college has a contractual obligation to other students, it must provide an atmosphere conducive to learning; consequently, it can suspend students guilty of misconduct.

Academic dismissals. Contrary to rulings on disciplinary actions, courts have been reluctant to interfere with public universities in academic matters. As stated by a federal district court in Missouri in 1968,[27] ". . . it is imperative that educational institutions not be limited in the performance of their lawful missions by unwarranted judicial interference." Decisions of governing bodies and academic officials of colleges or universities as to whether or not students have satisfied requirements entitling them to an academic degree are matters of judicial review only when school authorities are motivated by bad faith or in those instances wherein they acted arbitrarily. Should academic officials abuse their authority, however, courts can interfere with a decision to dismiss a student on the basis of academic performance.[28]

A federal district court in *Greenhill v. Bailey*,[29] listed two questions it would consider on appeal from a student who was dismissed. (1) Was the student delinquent in his or her studies or unfit for service in a profession?

This question, according to that court, is not a matter for judicial review. (2) Were authorities motivated by malice or did they act capriciously? This question is subject to review by the courts. Evidence that a student was treated radically different from others in a like situation would tend to indicate capriciousness on the part of university officials. In *Mahavongsanan v. Hall,*[30] a federal court of appeals stated that a hearing may be useless or harmful in discovering the truth concerning scholarship. That court held that the university in question did not breach its contract with the student inasmuch as universities are given wide latitude and discretion in framing their academic degree requirements. According to the court, ". . . implicit in the student's contract with the university upon matriculation is the student's agreement to comply with the university's rules and regulations, which the university clearly is entitled to modify so as to exercise properly its educational responsibility." In *Gaspar v. Brutin,*[31] a federal district court stated that all due process requires in academic dismissal is that a student be advised of his or her deficiencies in some form and be made aware, prior to termination, of failure or impending failure to meet standards.

In its majority opinion, the Supreme Court of the United States recently recognized that a court should not review academic decisions of a public educational institution in the absence of a showing of arbitrariness or capriciousness. In *University of Missouri v. Horowitz,*[32] Justice Rehnquist, delivering the opinion of the Court, stated ". . . academic evaluations of a student, in contrast to disciplinary determinations, bear little resemblance to the judicial and administrative fact finding proceedings to which we have traditionally attached a full hearing requirement." According to Justice Rehnquist, ". . . the educational process is not by nature adversarial; instead it centers around a continuing relationship between faculty and students, one in which the teacher must occupy many roles—education advisor, friend, and at times, parent substitute." Rehnquist stated that to enlarge the judicial presence in the academic community would risk deterioration of many beneficial aspects of the faculty-student relationship. In the *Horowitz* case, the plaintiff, a medical student, contended she was dismissed for disciplinary reasons rather than academic concerns, in that her personal hygiene and her failure to keep clinical schedules were at issue. The Court stated that personal hygiene and timeliness may be factors as important in a school's determination as to whether a student will make a good medical doctor as is the student's ability to take a case history or to diagnose an illness.

Because of statements in the Court's opinion in Horowitz that sufficient due process rights were granted the plaintiff and because of some concurring opinions that assumed procedural due process should be met in dismissals for academic reasons, a definite statement that a student dismissed on academic grounds need not be given any type of hearing may be too broad. In *Ross v. Pennsylvania State University,*[33] a federal district court determined, after reviewing the *Horowitz* decision, that Justice Rehnquist's statement that due process does not require a hearing for dismissal for academic reasons was not necessary to his decision and was, therefore, mere dicta. The district court in *Ross* opined that, in some circumstances, a hearing should be given a student to permit the student to explain poor scholarship and to determine that student's potential to achieve the intellectual level required of students in a particular program. This was based on that court's position that a student has a property interest in continuing his or her course of study. However, the court further stated a full adversary proceeding need not be required, and it agreed that no purpose is served by a hearing when a student fails to achieve a stated grade-point average. Because a discrimination charge, based on race, sex, or national origin, is always a possibility in dismissal cases and because a university must demonstrate lack of arbitrariness in decisions to dismiss for academic reasons, it is wise to provide for at least the rudiments of a hearing for students who disagree with dismissal decisions.

To assure that a decision to dismiss a student from an academic program will not be successfully contested by the student, certain basic requirements should be met. (1) Rules and regulations of each separate department or program for pursuing an undergraduate or graduate degree in that academic area should be clearly stated and made known to all students in the program. (2) Academic standards should be uniformly applied. (3) A department may modify its rules and regulations at any time so as to improve its offerings and to exercise properly its educational responsibilities; however, students should be promptly informed of such modifications and allowed, whenever feasible, to complete work under standards operative at the time of their initial enrollment in the program. (4) Grades should accurately reflect a student's performance in each course. (5) If a student lacks the academic qualifications to complete a degree program, an attempt should be made to discover this as early as possible in the student's academic career. (6) If a student is dismissed from a program for academic reasons and challenges the dismissal, the student should be permitted a conference with the departmental chairperson and the appropriate academic dean. Depending upon facts alleged at the conference, a decision can be made as to whether a more complete hearing should be given the student.

Academic dismissals with stigma-type allegations. When a student is dismissed from a program for unprofessional conduct—cheating, dishonesty, or plagiarism, for example—the rules relating to dismissals for disciplinary reasons are more appropriate. In *Hill v. Trustees of Indiana*

University,[34] the court stated that a student might have action under 42 U.S.C., §1983 if officials of a university impose stigma-type penalties without notice and an opportunity for the student to be heard. In the *Hill* case, the student challenged a plagiarism charge. The university offered him a hearing, but he chose not to avail himself of it. Because he did not exhaust administrative remedies, the court ruled there was no violation of due process. In *Slaughter v. Brigham Young*,[35] a graduate student working toward a doctorate published an article in which he listed a professor as coauthor when, in fact, the professor was unaware of his action. Notice of charges was presented to the student and a hearing was conducted before the Graduate Dean and members of the student's department. The court held that if regulations are reasonable and if the student is either aware of them or should be aware of them, and, further, that if proceedings are conducted before persons with the authority to act, find facts, and make recommendations, then due process has been accorded the student. Findings at such a proceeding are given some presumption of correctness. In *Pride v. Howard University*,[36] a student was accused of cheating on an examination. The student code of conduct provided a two-tier system of panels to hear allegations of student misconduct. One of the boards heard the charges when two members were absent and did not participate in the decision. Despite the student's allegation that he was not given a fair hearing, the court concluded the board could act if a majority was present and that the university did not breach its contract with the student.

Both the *Slaughter* case and the *Pride* case involved private universities, and the court decisions related to the contractual agreement between the student and the university. For public universities, dismissals with stigma-type allegations present due process issues. Procedural requirements, listed above for dismissals for disciplinary reasons, should be followed when a student is dismissed under these circumstances. In case of unquestioned academic dishonesty, the professor ordinarily should give a failing grade for the course and report the matter to the appropriate dean's office. In an instance in which the student denies dishonesty and either the student or the professor desires further action the case should be referred through channels to the dean, who, in turn, should follow procedural rules—either those enunciated in the university's student code or those articulated in this paper.

Student Privacy Rights

The Family Educational Rights and Privacy Act of 1974, 20 U.S.C. 1232g, establishes the privacy rights of students (parents if the student is under 18) with regard to educational records. The Act provides for inspection, review, and amendment of "educational records" by the student (or his or her parents if the student is under 18) and requires, in most instances, prior consent from the student for disclosure of such records to third parties. An institution that has a policy of permitting release of personally identifiable records or files of students, except "directory information," without written consent of the student, to individuals, agencies or organizations other than those listed in the Act, can lose federal funding. (The Act applies to all persons formerly or currently enrolled at the educational institution. No exclusion is made for "alien" students. However, the Act does not apply to a person who simply applies for admission but who never actually enrolls in, or attends, the institution.)

Knowledge of this Act is of considerable importance to university administrators. It affects not only daily operations of the institution but also determines, for example, what documents and files concerning students in an academic program, absent a court order and notification in advance, can be produced in a lawsuit.

SUMMARY

Case law differs for public versus private educational institutions. Lawsuits against private colleges and universities are based on a contract theory, or upon the tort theory of misrepresentation. For a public institution, to the extent a student can demonstrate a property interest in an educational program, due process requirements of the Fourteenth Amendment must be met. Although there may be no property interest in admission to an academic program, such an interest does exist once the student has been admitted. Further, there is a constitutional right to equal opportunity to receive an education.

Students have legal protection against unwarranted dismissals from academic programs. In a public institution, dismissals without a hearing may violate the student's constitutional rights. A student who is dismissed for disciplinary reasons must be given notice and a hearing. This generally has not been the case when a student is dismissed for academic reasons (there is no requirement for a hearing when a student fails to meet a requisite grade-point average, for example). In some circumstances, particularly when discrimination based on race, sex, or national origin is alleged, the rudiments of a hearing should be provided to permit the student to explain poor scholarship and to determine that student's potential to achieve the intellectual level required in a particular program, and also to protect the institution if litigation ensues. Because dismissal for dishonesty, cheating or plagiarism is more in the category of dismissal for misconduct, a hearing should be provided the student when such problems occur.

BIBLIOGRAPHY

1. *Dartmouth College v. Woodward*, 4 Wheat (U.S.) 418 (1819).
2. See 18 *American Jurisprudence*, 2d, Sec. 1.
3. *Ibid.*, Sec. 8.
4. See Alexander and Solomon, *College and University Law*, Michie Company, 1972, p. 26. These states include Michigan, Minnesota, California, Colorado, Georgia, Idaho, Oklahoma, Nevada, and Arizona.
5. See *Trustees of Columbia University v. Jacobsen*, 148 A.2d 63, aff'd, 156 A.2d 251 (1959).
6. *Dizick v. Umpqua Community College*, 577 P.2d 534 (Ct. of App., Ore., 1978).
7. See "Educational Malpractice," *University of Pennsylvania Law Review*, Vol. 124, Jan., 1976, p. 766.
8. See, for example, *DeMarco v. University of Health Sciences*, 352 N.E.2d 356 (D.C., Ill., 1976). The court stated in *Dixon v. Alabama State Board of Education*, 294 F.2d 150 (5th Cir., 1961), that it is a "well settled rule that the relations between a student and a private university are a matter of contract." In *Pride v. Howard University*, 384 A.2d 31 (D.C., 1978), the court concluded that a student Code of Conduct, contained in a manual given to each student, constituted a part of the contract between the student and the university. It also stated that the "usual practices" surrounding a contractual relationship can themselves be raised to the level of a contractual obligation, citing *Greene v. Howard University*, 412 F.2d 1128 (D.C. Cir., 1969). However, in *Lyons v. Salve Regina College*, 565 F 2d 200 (1st Cir., 1977), the court stated "contract law" should not be rigidly applied in all its aspects. "The student-university relationship is unique, and it should not be and cannot be stuffed into one doctrinal category . . ."
9. Sex discrimination is prohibited under Title IX, the penalty being loss of federal funding. However, admission to private undergraduate institutions is specifically exempt from Title IX and courts have held Title IX provides no private right of action.
10. 441 F.Supp. 1050 (D.C., Tex., 1977).
11. 98 S.Ct. 948 (1978).
12. 258 N.W.2d 108 (S.C., Minn., 1977).
13. 404 F.Supp. 316 (W.D., Okla., 1975).
14. See "College's Action as State Action," 37 ALR Fed. 601, at p. 606.
15. *Ibid.*, p. 609.
16. 96 S.Ct., 2586 (1976).
17. See, for example, *Cannon v. University of Chicago*, 559 F.2d 1063 (7th Cir., 1977), relating to alleged sex discrimination under Title IX.

18. *Ibid.*
19. 46 U.S.L.W. 4896 (1978).
20. 294 F.2d, 150 (5th Cir., 1961), *cert. denied*, 368 U.S. 950 (1961).
21. See *Esteban v. Central Mississippi State College*, 415 F.2d 1077 (1969), *Gonzales v. McEuen*, 435 F.Supp., 460 (D.C., Calif., 1977), and *Goss v. Lopez*, 419 U.S. 565 (1975).
22. Cited in footnote 21.
23. See *Tedeschi v. Wagner College*, 402 N.Y.S.2d 967 (S.C., NY, 1978).
24. *Jansen v. Emory University*, 440 F.Supp. 1060 (N.D., Ga., 1977).
25. See *Pride v. Howard University*, 384 A.2d 31 (D.C., 1978).
26. *Tedeschi v. Wagner College*, cited in footnote 23.
27. 45 F.R.D. 133.
28. See *Greenhill v. Bailey*, 378 F.Supp., 632 (D.C., Iowa, 1974) and *Mahavongsanan v. Hall*, 529 F.2d 448 (5th Cir., 1976).
29. Cited in footnote 28.
30. Cited in footnote 28.
31. 513 F.2d 843 (10th Cir., 1975).
32. 98 S.Ct. 948 (1978).
33. 445 F.Supp. 147 (M.D., Pa., 1978).
34. 537 F.2d 248 (7th Cir., 1976).
35. 514 F.2d 622 (10th Cir., 1975).
36. 384 A.2d 31 (D.C., 1978).

Concurrent Special Interest Sessions

Wednesday, November 29, 1978, 3:15 p.m.–4:30 p.m.

CREATIVITY AND GRADUATE EDUCATION

Chairman: John C. Guyon, *Southern Illinois University, Carbondale*
Calvin W. Taylor, *University of Utah*
Norman D. Frederiksen, *Educational Testing Service*

John C. Guyon

The roots of the 1978 program lie in a workshop entitled, "Creativity in Graduate Education" held at the 1976 meeting of the Council of Graduate Schools in Denver. That session was chaired by Dr. Anne Taylor, Associate Dean of the Graduate School of the University of New Mexico, with discussants Dr. Wimberly Royster, Dean of the Graduate School, University of Kentucky, and Dr. Sam C. Webb, Dean, Division of Graduate Studies, Georgia Institute of Technology. That program consisted of remarks from each of the individuals, and a lively discussion on the part of the deans and the audience with reference to the matter at hand.

The session mentioned above stimulated considerable interest, and there followed an effort to incorporate some aspect of creativity in graduate education in the program for the 1977 meeting at New Orleans. With the cooperation of Dean Donald White, an early-bird workshop was held at this particular meeting in which I participated in a discussion with, again Dr. Wimberly C. Royster, Dean of the Graduate School of the University of Kentucky. Again, there seemed to be considerable interest on the part of those present. Expressions of interest in following up this matter in terms of written correspondence, and oral communication, was substantial.

The program, at the 1978 meeting at San Diego, on Creativity in Graduate Education is designed to have a somewhat different flavor than those in the past. It is intended to be more than a simple discussion of attitudes and feelings about creativity and the graduate education process. It is intended to be rooted in a data base understanding of the creative process. To that end, Dr. Calvin Taylor, Director of the Institute of Creativity, and Professor of Psychology, at the University of Utah, will speak on "Creativity and the Creative Climates in Graduate Preparation for Careers" and Dr. Norman Frederiksen, Distinguished Research Scientist, Educational Testing Service, will speak on "The Assessment of Creativity in Scientific Problem Solving."

It is hoped that as a result of the 1978 workshop, there will be continued examination of the assessment of both creativity and the creative process in graduate education as carried out throughout graduate schools in the United States.

CREATIVITY AND CREATIVE CLIMATES IN GRADUATE PREPARATION FOR CAREERS

Calvin W. Taylor

Paradoxically, this speech is a pulpit-centered presentation about how we should *not* have educational processes which are pulpit-centered if we are talking about fostering productivity and creativity in students. Our educational system, through sixteen years of pre-college and college work, should prepare and produce the best possible candidates for being both effective graduate students and top-notch people later in their careers. To accomplish these goals will require improvement in classroom climates and the cultivation of creativity at all levels of education in order to yield the most effectively functioning, multi-talented persons entering graduate schools and coming out with graduate degrees. These can be people who are change-oriented or change agents, or perhaps better described as being improvement-oriented or improvement agents.

In a lighter vein, coping with a lot of correspondence is a problem from doing creativity research, especially after all project funds have been spent. One common letter goes like this: "I've been reading what you or someone else said on creativity, and I'm all excited. Now I'm ready to do a master's thesis and I want to do it on creativity. Tell me what I should do."

Major scientific efforts to study creativity started over two decades ago, as illustrated in our first (1955) Creativity Research Conference (Taylor, 1956). We called for "educational engineers" and for R&D in education in 1962, (Taylor, Ghiselin, & Wolfer). This nation is famous in agriculture not only for its research and development, but especially for its rapid implementation. This state of California is especially great in that respect. I have followed this issue for a long time, recently adding a strong emphasis of implementation (I) to R & D. Recently, the news media have indicated that about 2% of the people produce enough food so that almost 98% of us are free to try to do something else. If America isn't great, it isn't due to agriculture.

The lag in the implementation of research widely into education is great, a decade ago almost approaching infinity compared to agriculture's often very short time span from basic research through development and implementation into practice. The news is also citing a national decline in innovation and in the number of inventions. "What Is Happening with Creativity?" was just featured in a TV station editorial in Salt Lake City. All these suggest that we have problems of stimulating or even allowing creativity in most fields.

This presentation will deal at large with creativity problems, adding some observations and speculations. Every point herein has at least some basic soundness, with some points having more underlying evidence than others. The approach will open up the problems very widely to try to avoid arguments that the problems are not of enough concern to attempt to take any corrective actions.

Many places around the country have generated lists of statements that have been used to kill new ideas and to stifle or intimidate students. I have my own list of a dozen such rules. One game we have played many times is to tell a group of teachers that we want them to use all their imaginative powers to design the best classroom program possible. Then we ask them to name specifically all the possible features that should exist which would make it *the best classroom for stifling or killing creativity.*

After they come up with all kinds of things, we then innocently ask, "What does it all add up to?" Someone inevitably answers: "That's what school was like when I was a student." And another may then say, "That's the way some other teachers are still teaching." Upon being questioned, nearly all say, "We didn't do any imagining—all we did was recall classroom features that we had experienced in school." From the growing body of evidence, the time is ripe, almost overripe, for the education profession to be selecting teachers who produce great climates for students to develop a lot of their talent potentials and for teachers to become creative mindpower igniters in students.

Graduate Deans Can Stimulate Major Educational Improvements

It cannot be overemphasized that education is for people. The emphasis should be on the primacy of people in education. Too much of our system is focused on knowledge, not people. The way students have adjusted to knowledge-tested forms of education may often tend to maximize forgetting-after-learning, much more than retention by acquiring a lasting, working body of knowledge. Someone said, "Education is what you have left over after you've forgotten what you learned in school."

A university has been traditionally described as having two functions (besides being of service to the community, region, and nation). The first is to teach existing knowledge and the second is to produce new knowledge. The research results persuade us that these should be restated to put the focus on people. Universities are in business (1) to graduate knowledgeable people and (2) to develop new-knowledge-producing people. A severe check-up on graduates is needed to determine how well these two functions are being accomplished.

The issue that emerges is the opportunity for all graduate deans to assume a stronger position of educational leadership after taking a broad look at what happens to students and their multiplicity of creative and other talent potentials before, during, and after graduate school. I'm reminded of the tremendous success of the UCLA basketball coach, John Wooden, who has said that he believes in talent over experience. I think that the trend he set for top basketball talent flowing into UCLA is still occurring after he has retired.

The idea of a new set of names for various levels in education emerged in preparing for this presentation. The first level could be called "pre-high," the next could be called "jr. high," and so forth as listed below:

highest education
higher education
high (sr. high)
jr. high
pre-high

I recall a science leader in the Boise public schools who visited his son's elementary school and was told, "We're preparing your son for junior high." He replied, "Oh, no! He's got a lot more potential than that!"

If graduate deans would set up a model of what is really wanted in the way of the functioning characteristics of graduate students who enter graduate school, then they could ask all earlier levels of education to be preparing students to be the kind of persons really desired by the graduate schools.

The analogy is that graduate deans could urge the total school system that *the cream of the crop should rise to the top and be in the best cream-like state when it gets there.* Deans should therefore be concerned with everything in the educational system that could prevent the cream from rising to the top in its highest cream-like state. My students have generated over 40 words to indicate what could happen to the cream as it attempts to rise to the top. Some of these words are listed below:

spilled out
soured
curdled
separated
consumed
homogenized
polluted
diluted
frozen
graded
whipped
bottled
packaged
condensed
mixed up
sterilized
pasteurized
cartonned
dehydrated
powdered

As the above words were being openly generated in class, many of the students could recognize that these same kinds of things can and have happened to them and to other students in various classes and with certain teachers.

At the end of this exercise, another notion came up that some students wondered if when pure cream does rise to the top in its best cream-like state whether it would be recognized by the selection and evaluation system as being exactly what was wanted or whether the system might unfortunately reach for and take a substitute, such as "Dream Whip," "Non-Dairy Creamer," or "Coffee Mate" instead of the "Real McCoy."

In order to get those with the highest relevant talent potentials, the question could be raised by some graduate deans as to whether there should be a new educational pipeline up the ladder to get the best people in the best condition knocking at the doors of graduate schools. The technology is ready so that this could be possible. It might need to be only a temporary solution that could have enough effect on the existing pipeline so that it would become sufficiently up-to-date in identifying and cultivating relevant high potential talents and return to being the satisfactory source.

New Crude Measures As Educational Improvement Agents

The argument here is to have all students use more of their total mindpower. One thing that surprises a lot of people, especially many of those who have succeeded well in our present "learner" educational system, is that basic research accomplished during the last five decades has clearly shown that the group forms of the IQ (ability to learn) tests on which tens or hundreds of millions have been tested measure only about one-tenth (plus or minus) of the total mindpower of people. Such IQ tests are therefore not good *general intelligence tests.* Such tests are also not good tests of all of the abilities to think, nor do they come anywhere near adequately displaying the complexity of the brain and the total potential brainpower of people (see *Way Beyond the IQ*, Guilford, 1977). If we run our educational system so it is highly IQ-related, then basically we're cultivating only a narrow part of students' minds and are giving them a narrow-minded experience and perhaps thereby producing narrow-minded people.

One goal of educational programs could be *to expand the minds* of students. The attempt in practice may often have been to pour more knowledge, either in greater breadth or depth, into their minds. The approach of focusing on the multiple talent potentials of students differs by having them use a higher percentage of their total potential brainpower or mindpower—*A more relevant way to stretch their minds!*[1]

The best guarded secret in education is that although grades will predict grades, *they will hardly or only barely predict anything else*. There is little or no relationship between grades and adult performances (Hoyt, 1965). That has been documented quite strongly, and we were practically the first to find and report this shocking type of discovery (Taylor, 1958 and 1963; Price, Taylor, *et al.*, 1964 and 1971).

The first study cited was on scientists and engineers where a first correlation reported was .06, and then we did intensive studies on physicians. We started to shoot at the target of what a good medical student is, but soon realized that we were off target. The real task is to go beyond education to the issue of what a good physician is. We computed over 800 correlations between measures of performance of physicians on the job and academic grades of students in premedical years and in the first two and last two years of medical school. This was done on four samples: medical faculty, certified physician specialists, and general practitioners, both urban and rural.

After compiling the correlations on the four samples, the average correlation between grades and physician performance was .00, with 3% of the correlations barely significantly greater than .00—2% in the wrong (negative) direction and 1% in the positive direction. The remaining 97% were essentially zero, all forming a random error curve around .00—and *that's a lot of nothing*. We stated eleven sound, technical reasons why this total phenomenon cannot easily be explained away.

Our strong recommendation is that medical colleges should stop selecting persons who will be good medical students and start selecting persons who will be good physicians. In a similar vein, we reported on the "Selection of Scientists Who Will Be Productive in Their Careers" at an international conference (Taylor & Ellison, 1971; see also Ellison, *et al.*, 1976).

We believe very much in crude measures of new and important things as yet unmeasurable or not yet measured. We believe in trying to measure at least crudely these important things. We lean on these new measures much more than on more objective, more precise existing measures of less important things. By limiting your focus to objectivity and precision, you risk being off target, though with precision. As one newspaper writer said, you can have "false precision" by being off target with precision, i.e., precisely off target. We believe in focusing on the target and getting on target as much as possible, even though initially we must do so crudely, often more with subjective than objective measures.

---

[1] Some are currently excited about one hemisphere of the brain being used less than the other hemisphere. The more important evidence, however, is that only a small percent of either side of the brain is typically being used in school, i.e., the large majority of each side is *not* being used and developed in school.

Treat Students as Thinkers, not merely Learners

All our research and implementation experiences have led us to believe strongly that there are many more *"thinker" types of learning* than *"learner" types of learning.*

Yet unfortunately most classes are *learning* classes rather than *thinking* classes, i.e., where students are treated as learners, not as thinkers. This is a radical difference in what happens to the development and functioning of students. We emphasize having thinking centers rather than learning and emphasizing lifelong thinking rather than lifelong learning programs.

I asked if Mary Ann Zimmerman, a fifth-grade teacher, could come to teach my undergraduate students whom I have been trying to treat as thinkers. My students were prepared quite well and I wanted to let them experience some of her approaches. I would be the coach on the sidelines and let her be the quarterback running the class. But she couldn't be released from her students, so we arranged to bring her students along.

Before the session I asked my class, "Would you like to be graded this quarter against fifth graders or college students?" and they said, "By all means, fifth graders." After the session I again asked, "Who would you like to be graded against—fifth graders or college students?" and they said, "By all means, college students." This has been done two different years and its outcomes are very repeatable. The score is about 3+ to 1, in favor of the youngsters. Anyone can count the number of hands up at any moment on the videotape—or tally the number of ideas thought up by the fifth graders versus the college students. The kids won easily and everyone present clearly agreed. My students started out as participators and then, upon being startled, gradually became participant-observers and then slipped back as observers with their mouths open, letting the youngsters run up a string of uncontested points until we had to tell my students to get back in the ball game and try to participate again.

Afterwards my students have invariably said that they had never had it so good in elementary school as this teacher taught. They then asked, "Are we a lost generation?" Some observed, "We've been through a long intimidation process throughout our schooling and wonder if we can ever overcome that." They then came up with the notion that they needed a long, strong dose of anti-intimidation training to overcome what's been happening to them for so long. (One friend of mine says that the chosen people of the world are those who will not be initimidated.)

Similarly, there have been several indications that younger people are in many respects psychologically more ready to venture and to do frontier research than are college students.

Creativity Breaks Boundaries, Opening the Way for Better Selection and Education

One classification system lists four approaches to studying creativity. In Utah we have at least some research in each of the four approaches. One is to work on (1) the products that people produce and try to measure the degree of creativeness in the products and give feedback to the person. Another one is to be concerned with (2) the nature of the inner creative processes of students and also about how teachers can function so that these kinds of inner creative processes have a better chance to occur in their students. The third one is (3) to study highly creative people and determine their intellectual and non-intellectual characteristics to determine what the most typical set of creative characteristics is (after which selection and training programs can be designed to identify and cultivate those characteristics in the oncoming generations). The other approach is to (4) study the environment or the climate or the setting or the conditions under which people can do their most creative work. Any college or school program can try to profit from and apply the findings to date from each and every one of these four approaches.

We argue that there are many kinds of brainpower, as indicated by the great complexity of the brain and by basic research on talents. We have extended this talent list, quite soundly we believe, by selecting a handful of other broad talents. This extends beyond creativity, the breakaway talent. This handful of talents if functioning primarily in elementary schools in a variety of places across the nation. The main finding across the totem poles is that people do not stay at the same level—generally they tend to go up or down. That leaves room for people at the top and people at the bottom. They switch around so that no one stays in the middle or at the top or at the bottom.

When this happens, we find very talented students who did not look so talented as seen in the first academic totem pole in Figure 1.

We have a double-barrelled curriculum. Instead of using one talent full time to learn knowledge, students develop multiple talents while they acquire knowledge. They grow simultaneously in both talents and knowledge.

Practically every person at the bottom eventually proves to be at least above average in some other talent. Having only the academic talent functioning well in students is *not what you want in graduate school applicants*. To me, you want people to be able to come up with many new ideas of their own and then to make forecasts, (predictions, hypotheses), make plans, and make decisions about all these things, communicate

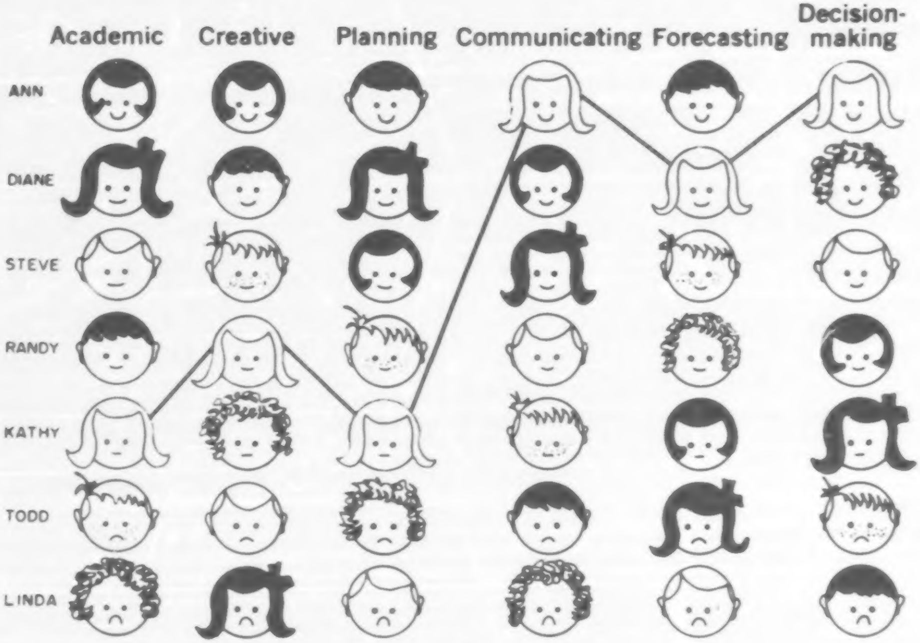


Figure 1

Taylor's Talent Totem Poles

effectively in order to get these things to happen. Collect and process and data, and then communicate the results soundly and clearly afterwards.

If the stage is properly set, the greatest resource in your schools are the students. If you let them think about assignments and do them in their own way, they will become very resourceful and your classroom costs can be kept to a minumum. In other words, teaching for talents is both an economical and an effective way of running educational programs.

In ten major talent-focused projects across the nation, the evidence has been almost completely in favor of the talent-focused program over typical educational programs in the comparison schools.

All the results on ten projects plus several replications have almost uniformly been in favor of multiple talent teaching over traditional academic-only-type of teaching (i.e., knowledge-focused teaching). Practically all results were leaning positively with the large majority being statistically significant differences.

In a set of significance tests of no difference (null hypothesis), it would be expected that about one-half would be positive and the other one-half negative, with the signs being randomly distributed across the two types of teaching. The probability would be essentially infinitesimal (about .0000. . .) that these unbroken strings of differences in a total of a few hundred comparisons, practically all in one direction and across several projects, could ever occur by chance. *It is suspected that no new educational approach has ever attained such powerfully significant results* on measured student performances across such a wide range of relevant classroom activities.

A master's thesis by Beverly Lloyd (1972) is revealing. She was the first teacher to put her students on the totem poles. She again ran a later elementary school class in six talent ways. She sees her students six different ways each day, rather than one way six times a day. For all but one of these 26 students she saw a double plus performance in some talent sometime. The fascinating but troublesome finding is that students who have double pluses in academic talent have apparently become so dependent upon the teacher that they are not very promising over in these other areas of thinking and doing or producing something of their own on their own. The more promising students with double pluses in these other five talents are those with the lower ratings on the "teacher-pleaser" academic talent.

Two Doctoral Types: Academic and On-the-job

In our first major study of scientists conducted at the Cambridge Research Center in Massachusetts, the scientists soon told us that there was an on-the-job Ph.D., and that most academic Ph.D.'s never make it. To do so, they generally have to succeed in doing two difficult things. The first is *to shed* some things that have been built into them, like overcoming certain programming and conditioning (such as being dependent upon getting almost all instructions from someone else, not themselves), overcoming intimidation, merely imitating and reproducing by following existing patterns, and so on. The second is *to add* their own thinking and doing by producing something of their own on their own. We believe that persons who have had creative and other talents functioning throughout their complete school career would be much more ready to obtain both an academic doctorate and then an on-the-job doctorate soon afterwards.

The National Academy of Engineering, the National Inventors Council, and others participated in a conference which produced a book, *Education for Innovation* (DeSimone, 1968). This was at a time when engineering was rapidly starting to expand into being a doctoral field. The main justification for the conference was to increase the chance that creative engineers would come out of the stream of the Ph.D.'s in engineering. This was to avoid what had tended to happen in English, in which the people who became creative writers had generally *not* come out of the stream of the Ph.D.'s in English.

Several things to consider in analyzing this problem are (1) the total combination of characteristics and accomplishments in which the person was selected—called hereafter the *total selection variable;* (2) the combined set of activities on which the person must later perform—called the *overall later performances;* (3) the degree of relationship between the two above, namely the total selection variable and the overall later performances; (4) the cutoff level on the total selection variable above which he "scored" in order to be selected; and (5) the cutoff level which any person will be considered successful on the overall later performance.

Let us consider the case of the "academic Ph.D." as a predictor of later performances which could be of sufficiently high level of excellence for persons to earn an "on-the-job Ph.D." For persons who have completed an "academic Ph.D.," let's assume that this means that they have thereby been in the top 10% of all students on this total selection variable. Let's further assume that to earn the reputation and title of an "on-the-job Ph.D.," they must rise in the overall quality of their functioning to be in the top 10% again of all persons performing in that line of work, whether it be teaching or administering or practicing professionally or researching or troubleshooting or solving problems or being some other type of leader—or whatever. In cases of promoting doctorates into administrative or other leadership positions, one must be aware that Peter's Principle may be fulfilled. In such cases doctorates may be promoted into activities essentially unrelated to their earlier areas of competence and in the later activities they may reach their level of incompetence, or at least be not nearly so competent. That is, they get promoted one step too far. Also, after their graduate training in research, the majority of academic doctorates, *never manage (or manage never)* to ever do any research again. So they are not *problem solvers*, at least not in the sense of doing research as their way to solve problems during their careers.

The prediction question is what percent of those who earlier were selected to be designated as academic Ph.D.s will later attain an on-the-job Ph.D. from their overall performance in their working career?

If the collected activities required to obtain the academic Ph.D. and those required to attain the on-the-job Ph.D. are correlated .73, then our best estimate is that a person with the first doctorate will have a 50:50 chance to attain the later on-the-job Ph.D. Yet it is very difficult, in fact almost impossible (even with justifiable corrections), to find a relationship of this academic vs. real world type anywhere near as high as .73.

Even with that unusually high level of correlation, half of the academic Ph.D.'s would *not* excel high enough "to earn" the later on-the-job doctorate. They may hold onto their jobs and perform above a minimum satisfactory level, but they may be a disappointment to this later organization that employed them for not having excelled, for not having performed at as high a level as expected. To themselves they also may have expected a higher level of performance, so both to their employers and to themselves, almost half of them will fail to perform up to expectations—though nearly all will probably be performing above a minimum satisfactory level. An error here can be that the expectation levels may be unrealistically high because of unsound assumptions that the correlation is much higher, therefore calling for a very high level of performance.

The predicted outcome becomes much worse for many, many cases that are more realistic where the correlations are far below.73—more typically in the range from about .40 down to .00 (a complete absence of any relationship). As the correlation decreases, many more than half of the academic doctorates would fail to live up to the high expectations of themselves and of others. At the extreme of zero (.00) correlation, only 1 out of 10 would perform in the top 10% careerwise, while 9 out of 10 would be *academic Ph.D. underachievers* in their careers. This would essentially be due to their much lower potentials in these later performances, rather than to a mythical statement that they failed to use or to live up to the high potentials tapped in their academic student careers. In cases of zero correlation those potentials are all irrelevant, so it is erroneous to assume them to be at all relevant.[2]

Reality awareness training could let all academic doctorates know that they and everyone else (including their later employers and organizations) may have high expectation levels that are unsound because of wrong assumptions about the relevance or validity of their characteristics which had functioned so successfully for them in the earlier system for earning the academic doctoral degree.

Their organization may therefore generally get a less excellent level of performance from them than expected. Also these doctoral-underachievers may have tendencies to wield a negative influence on those with high potentials to succeed in that organization. They may even try to set up barriers or push for rules and regulations and policies toward preventing or at least decreasing the chances that those with higher potentials (but without doctorates) can rise upward in that organization. They therefore resist having others make possible top contributions and accomplishments without having a "prerequisite academic doctoral degree." This is a warning that they thereby might become double deterrents to the high level performances that the organization really and honestly desired and had a right to expect from those they selected because of having doctoral degrees.

---

[2] The idea of stating these probabilities and correlations through using available techniques was sparked by Pamela Phinney, who is an insightful teacher not only of handicapped and retarded but also of gifted and talented students.

This reminds me of a job announcement from a university which said that a "Ph.D. is preferred but will not be considered as a substitute for the ability to do the job." They correctly saw their personnel task as determining who has the highest potentials to do the job, not who has attained the highest credentials from doing something which may be essentially unrelated to what the job opening requires.

Identifying Creative Talent Potential in Graduate Applicants

For nearly two full decades we have built a test for creativity and worked on it through nearly 20 successive forms, improving it in each new form. The creativity score was the one initially and solely sought. Later we added an academic talent score for the "grade-getting talent." A very timely finding and feature of the test is that it is Black-White fair, i.e., blacks score equally as well as whites. These are both "equal opportunity" scores.

We estimate that about 100,000 students a year are dropping out or *being dropped out* of our educational system at various levels, who are not high in the academic talent potential, but are in the top 25% potential in creative talents. They are *not seen as tops* because they are only being looked at in one comparatively narrow talent range, the one upon which schools have focused. That's a lot of loss of high-potential creative people.

The latest Form U of our test is being used for selecting people in Governer's Schools in two eastern states and is also being used for gifted and talented programs in various other places. It contains scores on academic potential, creative potential, leadership potential, arts potential, and career awareness. From many scores obtained to date it is evident that many students who have high scores in creativity are not very likely to stick around in the present system. Whether you can do something about that becomes a real challenge if someone wants to take it, but even people with high IQ or academic potential are ready to drop out, too. The system is not necessarily well designed for these types of highly talented people.

As a result of our summary article in *Science* (Taylor and Ellison, 1967) the Board of graduate deans who oversee the Graduate Record Examinations invited us to meet with them twice, once on the east coast and once on the west coast, to learn more about our test for creative talent. We had the opportunity to make a full presentation and both the test and the time were right for use in programs for identifying applicants with highest creative potential for graduate school and career work. To us, it was unfortunate that the Graduate Record Board made a decision to take an alternate course of action, one which failed to materialize in any creativity testing for applicants to graduate school. Since then, more than an entire decade of use and experience with creativity scores in graduate selection and education programs has been lost. This has been in spite of the findings on our campus that the creativity score by itself would predict success in graduate school better than the collective judgments of the official fellowship selection committee, which were based upon the entire information in the application folder, including the grades and GRE scores and recommendation letters. This study was done under my supervision by Victor Bunderson, whom we encouraged and supported to go to Princeton to complete his graduate studies for his doctorate and who won one of the two ETS Psychometric Fellowships awarded nationally that year.

It will now be possible to put together an even better form for selection of graduates with multiple scores for selection of graduate students as was used over 15 years ago.

A good analogy is that on the western side of our valley Kennecott Copper has moved the biggest mountain in the history of the world. They started initially to mine copper. As time went on, they also processed for gold in the precious silt stream flowing through the mills. Now they are getting from seven to eleven valuable metals. Mining the precious students for multiple talents can happen in the schools, so that most of these high-level talents are not dumped out on the streets as valueless waste products.

A reader of one of the articles on creativity wrote a letter to the editor saying that "Higher education and creativity are a contradiction in terms." I gave a speech on our campus called "Implementing Creativity—a Challenge to Higher Education." It was not well attended and not too well received, nor was the one on "To What Degree Are Colleges and Universities Obsolete?"

Our biggest disappointment is that we've never gotten anyone to get a real start on a college for the creatively talented, though we continue to spread the word of this need. For over two decades, we have worked on a test of creative potential built on a large sample of people and their degree of creativeness in their careers. A college could test its applicants for creativity and become a college designed and functioning for the creatively talented. Practically all of the approximate 2600 colleges and universities in our nation are deliberately looking for one kind of talent—they are teaching and testing for knowledge, not for developing talents. That has been a disappointment. Yet I have taught a series of my undergraudate classes (of 25 students per class) so that afterwards 99% of my students have been seen by at least some of their peers as being one of the top two students in at least one of the many talents that were functioning in the classroom activities.

More information on this multiple talent approach to teaching is available in "Be Talent Developers as Well as Knowledge Dispensers" (Taylor, 1968), "Clues to Creative Teaching" (Taylor, 1963-64), "The

Care and Feeding of Talent" (Bobowski, 1978), "Developing Effectively Functioning (Multi-talented) Persons" (Taylor, 1973), and "Teaching for Talents and Gifts: 1978 Status" (Taylor, 1978). The underlying supportive basic reasearch comes from our international Creativity Research Conference series of volumes entitled "Scientific Creativity: Its Recognition and Development," "Creativity: Progress and Potential," "Widening Horizons and Creativity," Instructional Media and Creativity," and "Climate for Creativity." The underlying theory was first expressed in a Report submitted to the U.S. Office of Education entitled "Development of a Theory of Education from Psychological and other Basic Research Findings" (Taylor, *et al.*, 1964). Information about many manuals for teachers to use as springboards into this type of teaching can be obtained through our office.

Some Final Comments:

Using new relevant measures with feedback, we are working with the residents in surgery helping to see that they become more physician-like than student-like as they get their post-doctoral specialty training. They in turn are telling what the opportunities are like in each of the situations where they are being trained. For example, in one hospital setting they may be having reduced opportunities in most things compared to what they do in the other nine settings. In contrast, in another setting, residents are getting above average opportunities in most things that train them to be physicians. (We have also developed instruments like this for classroom climates for creativity and development of multiple talents). We are dealing with about 50 residents and figure them to be well over $100 million dollars in manpower, counting total personal income, cost of office staff and facilities plus operating room, staff, and total hospital facilities used. Perhaps similar financial estimates (more accurate of course) should be made for all graduate students enrolled in each of your universities.

Graduate schools should be looking for students who are well prepared and eager, curious, open, and motivated to explore ideas at the edge of knowledge, and not just work with ideas that are already well established. The knowledge production industry is quite different from the knowledge reproduction industry. The full challenge for graduate schools could be to produce real leaders in new thoughts and the innovators and improvement agents in the professions, but too often many of the Ph.D.'s make no further contribution to the expansion of knowledge.

Arnold Toynbee wrote two pertinent articles focused on creativity. One is on "The Role of Creativity in History," and the other asks, "Is America Neglecting Her Creative Talents?" and therein defines creativity as a history-making talent in any field of human endeavor. Are we really neglecting our future history if we are *not* worrying about what's happening to our inventions and creativity? He said, "Creative talent is mankind's ultimate capital asset—a matter of life and death for any society." He was raising a question whether our nation has had its bursts or multiple bursts of creativity or if it still has bursts to come. He hopes that America will choose to fulfill her manifest destiny, which is to have another burst of creativity and spark the whole world, and to do so, America must treasure and foster all the creative and other talent potentials she has within her.

Graduate schools could really lead the way, if they would more actively take this creative leadership role, and simultaneously become agents toward improving education at all levels for all students.

There are many needed research studies on pre-graduate preparation, graduate student selection, classroom and total climate in graduate schools and pre-graduate schools, and the nature of the classroom processes and graduate student talent activities in graduate education. Also the lag time between research findings and their implementation into graduate educational processes and programs needs to be reduced drastically.

We welcome any opportunities to team up with graduate deans on any of these challenges. An abundance of scientifically based materials have been developed including strategies, procedures, and measures which with some modifications could be ready for initial adoption. We welcome helping you in taking bigger strides in these directions.

UTAH CREATIVITY RESEARCH CONFERENCE VOLUMES

1-3. *Scientific Creativity: Its Recognition and Development.* Calvin W. Taylor & Frank Barron, eds. New York City: Wiley & Sons, 1963 (now Huntington, New York: Krieger Publishing Co., Inc.,) xxiv-419 pp. (Also see Japanese translation.) Contains 30 selected papers from the first three (1955, 1957, 1959) creativity conferences entitled Research Conference on the Identification of Creative Scientific Talent.

4. *Creativity: Progress and Potential.* Calvin W. Taylor, ed. New York: McGraw-Hill, 1964. xix-288 pp.

5. *Widening Horizons in Creativity.* Calvin W. Taylor, ed. New York: Wiley & Sons, 1964. xix-466 pp.

6. *Instructional Media and Creativity.* Calvin W. Taylor & Frank E. Williams, eds. New York: Wiley & Sons, 1966. xxii-397 pp.

7. *Climate for Creativity.* Calvin W. Taylor, ed. Seventh National Research Conference on Creativity. Pergamon Press, 1972. ix-304 pp.

8. *Educational Challenges of Creativity*. Calvin W. Taylor, ed. Volume from 8th National Creativity Research Conference. Mimeographed, 1972.

REFERENCES

Bobowski, Rita Cipalla, "The Care and Feeding of Talent," *American Education*, October 1978, pp. 43-8.

DeSimone, Daniel V., ed. *Education for Innovation*. New York: Pergamon Press, Inc., 1968. 180 pp.

Ellison, Robert L.; James, L. R.; Fox, D. C.; McDonald, B. W.; and Calvin W. Taylor. *The Development and Validation of a Biographical Inventory for the Identification of High Level Nursing Talent*. Salt Lake City: University of Utah, September 1969. 172 pp.

Ellison, Robert L.; Abe, Clifford; Fox, David G.; Coray, Kevin E.; and Calvin W. Taylor. Using biographical information in identifying artistic talent. *The Gifted Child Quarterly*, vol. xx, no. 4, Winter 1976. pp. 402-13.

Guilford, J. P. *Way Beyond the IQ*. Buffalo, New York: Creative Education Foundation, Inc., 1977. 192 pp.

Hoyt, Donald P., The Relationship Between College Grades and Adult Achievement: A Review of the Literature, *ACT Technical Report*, No. 7, September 1965. Iowa City, Iowa: American College Testing Program.

Lloyd, Beverly. Unpublished project required for Master's degree in the College of Education. Salt Lake City: University of Utah, 1972.

Price, Philip B.; Taylor, Calvin W.; Richards, James M. Jr.; and Tony L. Jacobsen, "Measurement of Physician Performance," *The Journal of Medical Education*, vol. 39, no. 2, February 1964. pp. 203-11.

Price, Philip B.; Taylor, Calvin W.; Nelson, David E.; Lewis, Evan G.; Loughmiller, Grover C.; Mathiesen, Ronald; Murray, Stephen L.; and J. Gary Maxwell. *Measurement and Predictors of Physician Performance: Two Decades of Intermittently Sustained Research*. Salt Lake City: LLR Press, 1971. 164 pp.

Taylor, Calvin W. Be talent developers as well as knowledge dispensers. *NEA Journal*, December 1968, pp. 67-70.

Taylor, Calvin. Clues to creative teaching, ten monthly articles in *The Instructor*, 1963-4, usually beginning on page 5. The articles are entitled: Bridges from creativity research to teaching, Different approaches to creativity, The creative process and education, Knowledge and creativity, Learning and reading creatively, Listening creatively, Creativity and expression, Developing creative thinking, Developing creative charactistics, and Evoking creativity.

Taylor, Calvin W., Creative Contributions of Research Scientists in *Scientific Creativity: Its Recognition and Development*. Taylor, Calvin W. & Frank Barron, eds. New York: Wiley & Sons, Inc., 1963. p. 74.

Taylor, Calvin W. "Developing Effectively Functioning People," *Education*, vol. 94, no. 2, November-December 1973. pp. 99-110.

Taylor, Calvin W., Principal Investigator. *The Second (1957) University of Utah Research Conference on the Identification of Creative Scientific Talent*. Salt Lake City: University of Utah, 1958. p. 6.

Taylor, Calvin W., ed. *Teaching for Talents and Gifts: 1978 Status—Developing and Implementing Multiple Talent Teaching*. Salt Lake City: Utah State Board of Education, 1978.

Taylor, Calvin W., Ghiselin, Brewster, and John A. Wolfer, "Bridging the Gap Between Basic Research and Educational Practice, *NEA Journal*. January 1962. pp. 23-5.

Taylor, Calvin W.; Ghiselin, Brewster; Wolfer, John A.; Loy, Lorraine; and Lyle E. Bourne, Sr. *Development of a Theory of Education from Psychological and Other Basic Research Findings*. Salt Lake City: University of Utah, August 1964. 193 pp.

Taylor, Calvin W. and R. L. Ellison, "Biographical Predictors of Scientific Performance," *Science*, March 3, 1967, 155 (3766). pp. 1075-80.

Taylor, Calvin W. and Robert L. Ellison, Selection of Scientists Who Will Be Productive in Their Careers, *Proceedings of the XVIIth International Congress of Applied Psychology*, vol. I. Brussels: 1972. pp. 525-32.

Toynbee, Arnold, "Is America Neglecting Her Creative Talents?," *Widening Horizons in Creativity*. Taylor, Calvin W., ed. New York: John Wiley & Sons, 1964. pp. 3-9.

Toynbee, Arnold, On the Role of Creativity in History. Booklet published in Salt Lake City: University of Utah, 1967. pp. 2-22.

ASSESSMENT OF CREATIVITY IN SCIENTIFIC PROBLEM SOLVING

Norman Frederiksen

There are at least two major functions of the university: to transmit existing knowledge to its students, and to graduate people who will not only be knowledgeable, but also who will produce *new* knowledge. Such a statement implies that the Ph.D.'s produced by the graduate schools should be creative people—people who will propose and develop new and better solutions to problems.

No one would deny that these are appropriate goals for the graduate school. But one observer of the scene, Bernard Berelson (1965), finds it strange to regard the "graduate school as a creator of creativity." Everyone knows, he says, "the reputation of the graduate school as an effective stifler of creativity: how it rigidifies intellectual boundaries; how its disciplines quarrel over jurisdictional lines harder than the carpenters' union; how it forces the young into conformity with narrow criteria of scholarship . . . ; how it treats deviants from the true scholarly line; how it resists change itself." Berelson goes on to say that the traditional belief is that "the great graduate school is the school with the great men on the faculty. . . . My prejudice . . . is that the great graduate school is the school with the best students. . . . One of the recommendations that I have for a graduate school that is of Grade B quality and wants to move into A-quality is: not to try to buy good faculties—. . . but to buy good students. . . ."

Perhaps that idea is the motive for an action taken several years ago by the board that controls the Graduate Record Examinations. The Board expressed a desire to support research in the area of creativity—presumably with the idea that some method could be found for identifying students who would become creative producers of knowledge. In spite of the obvious difficulties, William Ward and I accepted the challenge, but with the condition that we undertake a limited aspect of the problem—to study creative aspects of scientific problem solving.

Problem solving is of course something that is taught in graduate schools, along with the transmission of knowledge. But there is, it seems to me, a marked tendency in schools—universities as well as elementary and secondary schools—to teach problem solving only in the limited sense that they teach known methods and algorithms for solving problems, and that they deal only with problems that have been clearly defined and for which all the information needed is available.

Important scientific problems are rarely posed in such a well structured form, with all the needed information conveniently at hand. More often the problem appears as a feeling of dissatisfaction about some state or condition, and it may be necessary first to discover more accurately what causes the discomfort—to formulate clearly what the problem is before embarking on problem solving in the conventional sense. Once the problem is defined, one must generate ideas (call them hypotheses) about possible causes or solutions; do a rough evaluation to decide which of these ideas are the best bets for further consideration; think of kinds of information that might help you decide which hypotheses are most viable, or information that might suggest additional hypotheses; get the relevant information, and consider what inferences can be drawn from it that might help; and eventually choose an attractive hypothesis. At about this point one may begin the more formal part of problem solving—to devise ways of ascertaining the correctness of the hypothesis, by mental or "experimental" operations, and to carry out such operations. Then one may have to go through additional loops in this process until a satisfactory solution is found or you give up.

Note that the early steps in this armchair analysis of the problem-solving process are not problem solving in the conventional sense. They involve searching and speculation, or what J. P. Guilford (1967) calls "divergent" thinking, while the final steps involve "convergent" thinking—using more rigorous, logical processes of problem solving to rule out the wrong hypotheses and identify the "correct" answer.

I believe it is true that graduate schools, like other parts of the educational system, put much more emphasis on teaching the skills in the latter part of the process than on providing experience and practice in the divergent-thinking skills. Only when the student is fortunate enough to be enrolled in a graduate seminar with a professor who is an able teacher and researcher does he begin to experience problem-solving activities in the full sense, through constructive critical analysis of published experimental work and participation in the planning of research studies that would more definitively answer particular scientific questions.

Our work for the GRE Board was based on such a conceptualization of the processes involved in scientific problem solving. Our initial purpose was to develop testing procedures which would yield scores that could be used as dependent variables (criteria) in research on creative problem solving (Frederiksen & Ward, 1978).

The work began with an attempt to build situational tests—tests that realistically simulate problems often faced by behavioral scientists. We used four such tests in the research; their names are Formulating Hypotheses, Evaluating Proposals, Solving Methodological Problems, and Measuring Constructs. Each Formulating Hypotheses problem, for example, requires examinees to read a brief description of an experiment or field study, to study a table or graph showing the results, and to write hypotheses, or possible explanations, that might account for the major finding of the study—a task not unlike that faced by a scientist who is trying to understand his own research findings or to evaluate research findings of others. Since it is difficult to conceive of anyone displaying creativity by choosing answers from a list, the tests all require the candidate to think of the ideas and to write them down. Six problems were used in each of the four tests.

How can the protocols from such tests be scored? We used a method we call category scoring. The first step in developing a scoring procedure is to sort a sample of responses (hypotheses, for example) into categories to form a classification of ideas that subjects actually think of and write down. A definition of each category is carefully written, so as to make the categories mutually exclusive and to make it easy for scorers to assign responses to the categories. The category definitions are then given to expert judges who are asked to evaluate each idea in the context of the particular problem. The consensus of these judgments is used to assign a quality value to each response category. The scorer's task, then, is merely to assign each idea written by a subject to the appropriate category. The quality values of the categories, and an index of the unusualness of each category (based on frequency of mention), are stored in a computer. For each protocol, the category numbers representing the ideas written by the subject are the input, and the computer generates a variety of scores.

We have been working with six scores. Three are based on the quality values: the average quality value for all of a subject's ideas, the average quality of the ideas the subject thought were his best (across the set of six problems), and the average quality of the ideas that are best according to our scoring system. Three other scores are based on number of ideas: the total number of different ideas written, the number of unusual ideas, and the number of ideas that are both unusual and of high quality. The latter score can perhaps be considered a measure of a "creativity."

Using an item-sampling method, the four tests were administered to about 4,000 candidates as an experimental part of the GRE Advanced Psychology Test. The tests were found to be of appropriate difficulty for the candidates, and the scores were in general reasonably reliable. The number of unusual-high quality responses was the least reliable score, since the number of such responses given by a typical candidate is a small fraction of his total. Of most interest is the low correlations with conventional tests. The three scores based on number of ideas, in particular, measured something quite different from that measured by GRE tests, and even for quality scores typically no more than 20% of the true variance was shared with any GRE test.

What about the predictive value of the tests? We have results only from a fairly crude investigation (Frederiksen & Ward, 1978). We made a follow-up study of those of our subjects who could be reached, who took the GRE, and who completed their first year of graduate study. Using questionnaire data, we found that the scores based on number of ideas were significantly related to self-appraisals of professional skills and to reported professional accomplishments in the first year of graduate work—areas where the more reliable GRE tests had very low validity. Students who wrote more ideas, more unusual ideas, and more unusual-high quality ideas were more likely to have attended professional meetings, engaged in collaborative research, been author or coauthor of a paper, advised other students on such problems as research design, and worked with or built laboratory equipment. GRE tests, on the other hand, were much better predictors of conventional such as criteria as grade-point average and quality of the graduate school attended. Thus there is some evidence suggesting that the new tests measure abilities that may be related to subsequent performance as a scientist, and do it better than conventional tests.

For what it may be worth, I would like to tell you about another finding, which needs to be replicated before we make too much of it. A dean at a leading medical school was interested in trying out various ways of improving selection of students, and six Formulating Hypotheses problems, chosen because they had a biological flavor, were given to members of the entering class. At the end of the first academic year, correlations between course grades and various selection measures were computed. It turned out that the best predictor of course grades was the old reliable undergraduate grade-point average. Tied for second place (roughly speaking) were several conventional tests such as the Medical College Admissions Test, and, of all things, one of the FH scores: the number of hypotheses that were both unusual and of high quality. The interesting part is that all the correlations were positive except the one I just mentioned: there was a *negative* correlation between course grades and the FH score that has the best claim to being a creativity score. The dean's comment was, "Well, that tells you how we teach our first-year students."

Our next study compared the free-response form of Formulating Hypotheses with a machine-scorable form (Ward & Frederiksen, 1978) in which lists of hypotheses were presented from which the subject could choose the ones he thought should be considered. The comparison involved relationships of scores from the experimental tests to scores representing several relevant cognitive abilities, including verbal ability, several varieties of reasoning, cognitive flexibility, and two kinds of fluency—fluency in composing connected discourse and fluency in producing ideas about a given topic. These two abilities are thought to be related to creativity. Cognitive flexibility presumably measures ability to change set and to alter established ways of thinking which may also be important in creating thinking.

We found that the quality scores from free-response and machine-scorable forms of FH have very similar relationships to the cognitive abilities; both forms are substantially correlated with verbal and reasoning abilities and with cognitive flexibility, and both have little or no correlation with the fluency skills. But for the three scores based on *number* of ideas, major differences are found between machine-scorable and free-response forms: all three number scores are substantially correlated with fluency measures for the free-response form only; and, similarly, number scores are related to cognitive flexibility for the free-response form only. When conventional tests—the two GRE aptitude tests and the advanced achievement test—are examined in the same way, we find that all three tests are correlated with all the cognitive abilities except the fluency measures. Thus the free-response form of Formulating Hypotheses, but not the machine-scorable form, measures something not measured by the conventional tests, and the relationships are consistent with the notion that creative aspects of thinking are being tapped by the number scores.

We are now working with more realistic simulations involving unfolding problems that give us a longitudinal view of the process of problem solving. In this format, a problem is first posed in a vague form with little information, and the subject has an opportunity to write his first off-hand hypotheses. Then he can request specific information, write a new list of hypotheses upon receiving additional information, ask for more information, and so on, until there is sufficient information for most subjects to solve the problem. This format will enable us to observe changes in performance and correlates of performance as subjects move through the problem. It will also enable us to generate additional kinds of scores, such as the number of ideas that are dropped for good reasons and the number dropped for bad reasons (good drops and bad drops); the number of good retentions and bad retentions; and the scope and breadth of ideas thought of by a subject. We hope that these new materials will provide a better basis for developing and testing a model of problem solving behavior.

Thus the evidence so far suggests that it is feasible to use simulations of scientific problems to elicit problem-solving performance. When viewed as tests, these simulations have satisfactory psychometric properties. They do not measure the same thing as conventional aptitude and achievement tests. They show signs that they may predict professional performance. If such findings are corroborated in other research, the tests ought to be useful for something.

Such simulations presumably would be useful for the purpose for which they were originally intended—to provide dependent variables for use in research on creative thinking. One obvious example would be to use simulations in evaluating the results of experimental treatments aimed at improving creative problem solving.

Such simulations might also be useful in selection. Although the machine-scorable form would presumably have little or no advantage over the conventional tests, the free-response form would probably be of some value; but it would be impractical, assuming current fee and time schedules. Such tests could, perhaps, be used as the second part of a two-phase selection program. For example, they might be used by a university to replace or supplement an interview after a preliminary selection had been made.

Still another possibility would be to use simulations as part of an instructional program. If it is true, as I implied earlier, that, in this world of multiple-choice testing and teaching, students get little opportunity to practice the skills involved in thinking of the options for themselves, then simulations of the sort I have described could be used to give such practice. The category scoring system provides a way of giving feedback to students. And the simulation would, I should think, offer an ideal opportunity for a lively discussion of the ideas thought of by the students and the additional ones they find in the response categories.

Several kinds of feedback could be given the students, in addition to the list of categories. One would be the quality values attached to the categories, which would enable students to tot up their own scores. Another would be to provide critiques of the ideas represented by the categories. Still another would be to include models of excellent performance. Or all these could be used in combination. If desired, feedback could be provided on paper, thus eliminating the need for an instructor; however, I would think that a class discussion led by a good instructor would be the ideal way to use such materials in instruction.

A study of a more primitive version of a formulating hypotheses test as a training device was in fact carried out several years ago (Frederiksen & Evans, 1974). The training consisted of presenting models of good responses to subjects immediately after they had completed taking each FH item. Some of the subjects received "quality" feedback; they were shown carefully worded statements of the very best ideas. Others received "quantity" feedback; they were shown lists of ideas substantially longer than most subjects wrote. A control group received no feedback. I was not surprised to find that subjects wrote more hypotheses on subsequent problems after receiving the quantity feedback, but I was surprised to find that they wrote better ideas after receiving the quality feedback. In view of the brevity of the experiment, it seems unlikely that the quality feedback improved underlying abilities to any appreciable extent. It seems to me more likely that what it changed was the subjects' *standards* with regard to quality—how good is "good enough."

Perhaps the use in instruction of realistic simulations of problem-solving situations, with appropriate feedback in the form of model responses, would help to restore high standards of educational achievement in our schools and colleges and make graduate school less a stifler and more an enhancer of creativity.

REFERENCES

Berelson, B., Creativity and the Graduate School. In Gary A. Steiner (Ed.), *The Creative Organization*. Chicago: University of Chicago Press.

Frederiksen, N., & Evans, F. R., "Effects of Models of Creative Performance on Ability to Formulate Hypotheses," *Journal of Educational Psychology*, 1974, *66*, 67–82.

Frederiksen, N., & Ward, W. C., "Measures for the Study of Creativity in Scientific Problem Solving," *Applied Psychological Measurement*, 1978, *2*, 1–24.

Guilford, J. P., *The Nature of Human Intelligence*, New York: McGraw-Hill, 1967.

Ward, W. C., & Frederiksen, N., Construct Validity of Free-Response and Machine-Scorable Versions of a Test of Scientific Thinking, (ETS RB 78-15), Princeton, N.J., Educational Testing Service, 1978.

105

GRE INTERPRETATIONS AND USE—NEW FORMS, NEW POPULATIONS

Chairperson: Carolyn H. Hargrave, *Louisiana State University*
Bernard V. Khoury, *Graduate Record Examinations Board*
Mary Jo Clark, *Educational Testing Service*
Cheryl Wild, *Graduate Record Examinations Board*

THE USE OF GRE SCORES IN GRADUATE ADMISSIONS

Bernard V. Khoury

These remarks are intended to provide a framework or a context in which scores on the Graduate Record Examinations (GRE) might be useful in evaluating applications for admissions to graduate schools. As noted in earlier comments, the dual impacts of grade inflation at the undergraduate level and the Family Educational Rights and Privacy Act (Buckley amendment) on letters of recommendation have contributed to increasing skepticism about the value of undergraduate grade averages and letters of recommendation in evaluating prospective graduate students. The psychometric properties of scores in the GRE's make them immune to the inflationary problems which beset grades and recommendations. Despite their strengths as "non-inflated currency" in the evaluation of graduate applicants, it is important to keep in mind several suggestions for use of GRE scores.

Faculty who interpret GRE scores and who use them in admissions decisions should be very familiar with various publications that describe their properties, and limits on their interpretation. The two most useful publications are the *Guide to the Use of the GRE* and the GRE *Technical Manual.* Admissions committees should read, understand, and be guided by these publications which contain discussions and data about interpretation, percentiles, validity, reliability, and guidelines for use.

Faculty should also have a first hand acquaintance with the contents and format of the tests. A sample GRE aptitude test is widely distributed to students and faculty throughout the world. GRE advanced tests are available for inspection by department chairmen and deans. Admissions faculty should review the level, scope, difficulty, contents and emphases of the tests to determine if these meet the admissions interests of the school or the department.

A third recommendation is to study the validity of the GRE tests—and other admissions variables—in the school or department. It is important to take a systematic look at the admissions process to provide reasonable assurance that admissions decisions are in the best interest of the department and of the students. Such a validity study would provide information on how successful a department is in selecting students who will succeed in a program and in rejecting those who will not succeed. It is very important to keep in mind that validity is not solely a property of a test, such as the GRE. Rather, validity is a property of an admissions process in a specific institutional setting when evaluating a group of applicants to a program with specific purposes, procedures, and outcomes. It makes little sense to discuss the validity of the GRE in the absence of such a specific institutional context.

It is also extremely important to know the "limits" of GRE scores. The various GRE tests—verbal, quantitative and analytical aptitude and advanced tests in 20 fields—have standard errors of measurement of 30 to 50 points. This means that, in general, admissions decisions should not be made solely on the basis of score differences smaller than these values, because the tests—like any measurement process—can only measure performance within certain limits of accuracy.

It is also important to use GRE scores along with other admissions criteria for evaluating applicants. Although the GRE itself is a valid predictor of success in many graduate schools, it is usually more effective to use the GRE scores in conjunction with other predictors such as grade average, letters of recommendation, evidence of perseverance, motivation and commitment, and other past accomplishments.

Most studies of our ability to predict success in graduate schools (defined by some quantity such as graduate grades, degree completion, citations, salary) show that we have not been able to quantify all of the predictors of success. In most programs there is little likelihood of avoiding, nor is it necessarily desirable to avoid, the subjective judgments of faculty in making an overall evaluation of each applicant with respect to other applicants, in light of the needs and strengths of the program, the faculty, the institution, the resources, and the present and prospective students. Admissions will depend on the institutional role and mission but admissions decisions should always be made under a procedure that assures fair treatment of each applicant. There is no single best admissions process. This diversity will continue to be one of the strengths of graduate education in this country.

THE VALIDITY OF GRE TEST SCORES: A REVIEW OF THE EVIDENCE

Mary Jo Clark

I want to begin with what may appear to be a rather esoteric question: What do we mean when we refer to the "validity" of a test score?

There are detailed technical definitions of the term, but for most of us the word "valid" means "true"—

> Does a test measure what its developers say it measures?
>
> Do the results predict performance in tasks that are assumed to require the abilities said to be measured by the test?

Asking the question in this way helps, I hope, to make it clear that a test never stands alone—there is no such thing as intrinsic "validity" for the test itself—we can only consider whether the test actually measures what it is described or defined to measure, and whether scores on the test usefully predict some relevant future behavior or performance. Therefore, when we consider the predictive validity of GRE test scores we are asking whether a person's ability to deal with the materials included in the tests is related to some later measure of academic performance or, in more precise terms, whether the scores earned by individual test-takers are positively correlated with first-year graduate school grades or some other criterion of academic success.

Clearly, both predictors and criteria are necessary elements in the validity equation, and both need to be represented by a measurement or score. One of the cardinal principles of measurement is that every observed test score is only an approximation of an individual's "true" score on the ability being tested; the object is to reduce the error as much as possible, but it can never be eliminated entirely. This principle applies to measures of success or criteria as well as to measures of ability or prediction. Given our imperfect science of measuring human talents and performance, we are no more likely to find a perfectly accurate or reliable criterion of success than we are to develop a perfectly accurate or reliable test of human ability. Because of these errors of measurement on both sides of the equation, we can only hope to estimate the "true" relationship between any given predictor and criterion.

There are two major implications of these introductory comments for our topic today:

> First, we should consider the validity of any measure only in relation to the skills it is designed to estimate. For the current GRE Aptitude Test, these skills are labeled verbal, quantitative, and analytical reasoning or ability. A large body of evidence indicates that students with high levels of performance on these types of tests tend to perform well in school-related learning situations. But clearly the tests are not designed to measure all of the abilities important to academic success, and we must expect less than perfect prediction of this success.
>
> Second, in evaluating a test's predictive validity we must consider not only the recognized limitations of the test but also limitations in the

measurement of successful performance. In the graduate school context, as well as at other educational levels, the operational definition of "success" is often grades in some particular set of courses, or over some specified period of time. There are many problems with the use of grades as a criterion of success—at the graduate level, for example, faculty members tend to assign mostly A's and B's, which results in very little variation to be predicted. However, there are also problems with other criteria, such as degree completion, or performance on comprehensive exams, or faculty ratings, all of which require long periods of time or special data collection efforts. Therefore, more often than not we fall back on grades as the most readily available as well as relevant criterion of student performance, despite our awareness of their limitations.

Other problems also plague our efforts to demonstrate the relationship between GRE test scores and academic success in graduate school. One problem results from the fact that not all college graduates elect to take the test, thus limiting the range of talent represented in the pool of test-takers. Also, a decision to take the GRE's is known to be influenced by factors such as ethnicity, age, or major field. The influence of student self-selection on the score distributions is further complicated by the use of the scores in the graduate admissions process. That is, since applicants with lower test scores are less likely to be admitted, the distribution of scores earned by enrolled graduate students tends to be more restricted than the distribution of applicant scores. If all enrolled students have higher GRE scores, or have strong alternative evidence of ability to counteract lower test scores, it does not seem very reasonable to expect a high correspondence between their test scores and variations in the grades they receive in graduate school. Another way of putting this is to say that when most of the test scores are within a narrow range or band, we would expect that factors other than the abilities reflected in the test scores account for much of the variation in first-year grades. For example, predictive validity coefficients tend to underestimate the importance of measures that were given heavy weight in the admissions process because these admissions decisions result in restriction of range in the scores of enrolled students, thus limiting their usefulness in the prediction of performance.

Another problem is that validity coefficents, like other statistics, become increasingly reliable as the number of cases on which they are based becomes increasingly large. Put another way, a correlation between test scores and grades can be computed for five students in a given graduate program, but we would not have much confidence in the specific results—the chances are quite good that we would get different results with successive samples of five students. Even with 25 or 30 students in a program, the statistical procedures produce relatively unstable results. Unfortunately, these numbers are typical of the number of graduate students who enter many of our graduate programs in any given year. Therefore, it is difficult to get reliable estimates of the relationship between admissions variables and academic performance for many graduate programs, even when studies are repeated at regular intervals.

An alternative to repeated studies as a way to overcome the problem of small numbers is to carry out similar studies in several departments and then pool the results. However, because fields of study are very different, it is necessary to pool the results from departments in the same or closely related disciplines. This is often difficult for individual departments to arrange because it requires the cooperation of several different universities. One major motivation for the cooperative validity studies that have been supported by the GRE Board in recent years is to assist in the collection of departmental data that can be pooled to provide more reliable estimates of GRE validity coefficients for all departments in a given field.

Having established a frame of reference for evaluating evidence regarding the predictive validity of GRE test scores, let us look at some of the evidence. For the most part, I will summarize a recent report by Ken Wilson at ETS concerning the results of a three-year GRE Cooperative Validity Studies project. Sponsored by the GRE Board, this project carried out and summarized validity studies for more than 150 graduate departments in more than 35 universities. The studies demonstrated a positive relationship between GRE test scores and first-year graduate school grades; the correlations typically were higher for programs that included students with a relatively wide range of test scores and a fairly wide range of graduate school grades, and lower if the scores or grades were concentrated in narrow ranges.

I want to share with you four tables with specific results from this study. But first, I want to consider one other general question about the validity of GRE scores, and that is: Do the GRE tests predict equally well for all kinds of test-takers? I will comment briefly on five test-taker characteristics that usually are of most interest:

1. *Gender*—Do the GRE tests predict equally well for men and for women? The avilable evidence indicates that the answer to this question clearly is "yes." The distribution of verbal scores is about the same for men and women; though men average higher scores on the quantitative test, they also are much more inclined toward graduate study in fields that require quantitative talents. If anything, there may be some slight tendency to underpredict the graduate school grades of women.

2. *International Students*—Most of the limited evidence for the relationship between GRE test scores and the graduate school performance of international students for whom English is not the native language is from samples in science or engineering departments, where the numbers are large enough to compute the statistics. In such departments, data indicate that the quantitative scores of U.S. and international students are similar and they predict first-year grades about equally well; the verbal scores of international students tend to be considerably lower than the verbal scores of U.S. students in these fields, but the verbal scores are not much related to performance for either group.
3. *Returning Students*—What about the predictive usefulness of GRE scores for persons who have been away from academe for an extended period of time, or who are older than the usual graduate student group? Students of this type are scattered among graduate programs; it has been particularly difficult to conduct validity studies with enough of them to get good evidence about the relationship between test scores and graduate school performance. Studies are needed in this area. Concerning the scores themselves, there is evidence that among men and women who are interested in the same field of graduate study, average scores on the GRE verbal test are about the same for college seniors and for test-takers several years out of college. Quantitative scores are somewhat lower for older test-takers, both men and women, probably reflecting less likelihood of maintaining familiarity with quantitative concepts and procedures in the years after college.
4. *Major Field of Study*—Data from the Cooperative Validity Studies support what most of you would expect—scores on the GRE verbal test tend to best predict grades in the humanities and arts, scores on the quantitative test best predict grades in the sciences, verbal and quantitative scores carry about equal weight in the social sciences, and scores on an advanced test in a specific field do a better job of predicting graduate school grades in that field than do scores on either of the aptitude tests. Since this is only the second year for the analytic reasoning section of the aptitude test, and students with these scores are just beginning graduate study, it is too early to know how this score may relate to performance in different fields. A special effort will be made in the spring of 1979 to enlist graduate schools in a new round of validity studies in order to find an answer to this question.
5. *Ethnicity or Race*—Do GRE test scores predict graduate school performance equally well for minority and nonminority students?

> This question has been particularly difficult for the GRE program to answer definitively, because the number of minority students who enroll in any given graduate program in any one year usually is small. However, the available evidence suggests that the predictive validity of GRE scores in relation to graduate school performance is very similar to the predictive validity of LSAT scores in relation to law school performance, or SAT scores in relation to undergraduate college performance. Therefore, it seems likely that the conclusions based on extensive studies of the comparative predictive validity of LSAT and SAT scores for minority and nonminority students would also tend to hold for GRE scores. In an overwhelming majority of studies carried out using LSAT or SAT scores, the test scores of minorities predicted first-year grades at least as well as did the test scores of whites. In fact, frequently the test scores estimated slightly higher first-year grades than were actually received by minority students. The overprediction was reduced when both test scores and college grades were used to estimate performance, rather than using either test scores or grades alone. One implication of the overprediction result is that the use of a separate equation to predict first-year performance for minorities might reduce their chances for admission, rather than improve them, because a separate equation could predict first-year grades that were lower than the grades predicted by an equation based on all students.

Unfortunately, there is no evidence in the research literature that the problem of typically lower test scores presented by minority applicants on the one hand and the goal of increasing the number of minority students on the other hand is amenable to a strictly technical solution. We can and will continue to work toward eliminating any conditions in the testing situation that may contribute to lower scores by some test-takers, just as graduate schools and departments work toward eliminating handicapping factors in the educational process, but in the end the solution rests in acknowledging and dealing with competing values and goals.

Having reviewed the evidence for the extent to which GRE test scores predict graduate school performance for various kinds of test-takers, let us look at some of the specific results from the recent Cooperative Validity Studies.

Table 1 summarizes median validities obtained in the Cooperative Validity Studies and in earlier studies for several specific fields of graduate study. In every case, each of the GRE scores is demonstrated to be a "useful" predictor of graduate school performance, as indicated by a positive correlation with the criterion. However, as expected, test scores of enrolled students are not highly related to grades or other measures of differential performance in the program; verbal and quantitative scores

112

TABLE 1

*Median Validities Obtained in Cooperative Validity Studies Samples in Selected Fields with Median Validities Obtained in Earlier Validity Studies**

Fields(s)	Period covered by studies	Median validity (number of samples)			
		GRE-Verbal	GRE-Quantitative	GRE Advanced	UGPA
Biosciences	1974–1976	.19 (22)	.24 (22)	.37 (10)	.31 (14)
	1952–1972	.18 (7)	.27 (8)	.26 (5)	.13 (2)
Chemistry	1974–1976	.19 (11)	.37 (11)	.41 (5)	.33 (7)
	1952–1972	.22 (14)	.28 (13)	.39 (9)	.27 (7)
Engineering	1974–1976	.26 (9)	.38 (9)	—	.14 (4)
	1952–1972	.29 (11)	.31 (10)	.44 (7)	.18 (4)
Mathematics	1974–1976	.30 (6)	.29 (6)	.40 (2)	—
	1952–1972	.30 (6)	.27 (6)	.44 (5)	.19 (4)
Psychology	1974–1976	.18 (13)	.19 (13)	.32 (8)	.20 (8)
	1952–1972	.19 (23)	.23 (22)	.24 (17)	.16 (15)
Education	1974–1976	.16 (7)	.20 (7)	.53 (2)	.30 (4)
	1952–1972	.36 (15)	.28 (14)	.24 (6)	.30 (5)
English	1974–1976	.30 (7)	.18 (7)	.40 (6)	.27 (4)
	1952–1972	.21 (6)	.06 (6)	.43 (3)	.22 (4)
"Verbal" fields	1974–1976	.31 (70)	.25 (70)	.35 (31)	.30 (46)
Social science	1952–1972	.32 (11)	.32 (10)	.46 (5)	.37 (5)
"Quant." fields	1974–1976	.20 (63)	.31 (63)	.34 (29)	.29 (38)

*Source of data for earlier studies is a summary by Willingham (1974) of studies during the period 1952–1972. Medians for 1974–1976 are from the Cooperative Studies, using a Graduate GPA criterion. Earlier validities are primarily from studies using Graduate GPA but other criteria were involved in some cases. Number of samples on which medians are based is shown in parentheses.

correlate about .3 with first-year grades, while the correlations between grades and scores on the GRE Advanced Tests are between .35 and .40.

Table 2 shows the distribution of validity coefficients obtained in separate studies for 70 departments in "verbal" fields and 63 departments in "quantitative" fields. These data show that in a given department the relationship between a single test score and first-year grades might range from higher than .6 to negative, but that most of the correlations fall between .1 and .5. It should be noted that these samples were usually small—for example, about a third of them included fewer than 25 cases.

TABLE 2

Distribution of Validity Coefficients for Groups of "Verbal" and "Quantitative" Fields

Level of validity	*Verbal fields**				Quantitative fields**			
	GRE-V	GRE-Q	GRE Adv	UGPA	GRE-V	GRE-Q	GRE Adv	UGPA
.60+	2	2	4	3	1	1	1	1
.50-.59	8	4	5	4	1	6	6	2
.40-.49	16	8	5	5	4	11	4	5
.30-.39	10	11	4	10	8	15	4	10
.20-.29	17	18	4	11	16	17	5	9
.10-.19	8	15	5	8	10	8	5	4
.00-.09	4	4	3	4	11	10	2	2
Negative	5	8	1	1	11	5	1	5
Total	70	70	31	46	63	63	29	38
Mdn coefficient	.31	.25	.35	.30	.20	.31	.34	.29

Note: Includes data for samples of ten or more cases.

*Biosciences, chemistry, engineering, mathematics, physics, geology, economics and other fields (cf., notes to Table 5).

**English, history, sociology, government and political sciences, psychology, Education, languages, anthropology and other fields.

Data in the first two tables present results when individual predictors are considered in relation to a performance criterion. One way to improve prediction is to combine several predictors, usually through the use of multiple regression procedures. Unfortunately, although these procedures are routinely applied in other educational settings, usually they cannot be justified within a single graduate department because of the limited number of students. However, within the Cooperative Validity Studies project it was possible to combine data from several departments in the same field at different universities, and then to estimate the best weight for each predictor from the pooled data. Table 3 presents these results for five fields. Clearly, combining verbal and quantitative GRE scores and undergraduate grades results in higher validity coefficients than were reported for each predictor separately in Table 1.

Figures 1 and 2 show scatterplots of GRE verbal test scores in relation to first-year graduate school grades for minority and nonminority students in two departments. These results are typical of the 15 departments in the

TABLE 3

Results of Pooled-Departmental-Data Regression Analyses, By Field

Field	No. of samples pooled	Total no. of cases	Standard regression wt			Multiple correlation coefficient
			GRE-V	GRE-Q	UGPA	
Biosciences	(19)*	458	.177	.206		.292
	(13)**	390	.178	.240	.208	.390
Chemistry	(9)	300	−.077	.368		.343
	(6)	203	.005	.289	.330	.444
Psychology	(12)	518	.184	.187		.286
	(8)	326	.234	.178	.200	.386
English	(6)	215	.352	.110		.394
	(5)	151	.368	.084	.183	.437
History	(8)	262	.197	.155		.294
	(7)	228	.155	.148	.307	.415

*Number of samples in analysis involving V and Q only as independent variables.

**Number of samples in analysis involving V, Q, and UGPA as independent variables.

Cooperative Validities Studies project that included from 3 to 20 minority students in their data. When there is little range in course grades, as in these two examples, the examination of scatterplots like these may be more useful than correlation coefficients in a department's examination of the relationship between admissions variables and a performance criterion.

This concludes our brief examination of the evidence concerning the validity of GRE scores. As mentioned earlier, the search continues—in particular, all of the data I have reported today are based on the longer verbal and quantitative tests that were standard GRE measures prior to fall 1977. Beginning in October 1977, the restructured aptitude test consisted of shortened versions of the verbal and quantitative measures and a new test of analytical reasoning. All evidence points to a close correspondence between the old and new verbal and quantitative measures, so we do not expect any change in the predictive validity of these sections of the restructured test. However, we need to check on this assumption, and obtain information about the predictive validity of the analytical reasoning measure. Therefore, the GRE Board has authorized a special effort to enlist a second wave of institutions and departments in validity studies based on students who took the GRE tests in 1977-78 and began their graduate study this past fall. These studies will be carried out during the next several months. Please let us know if your university would like to participate.

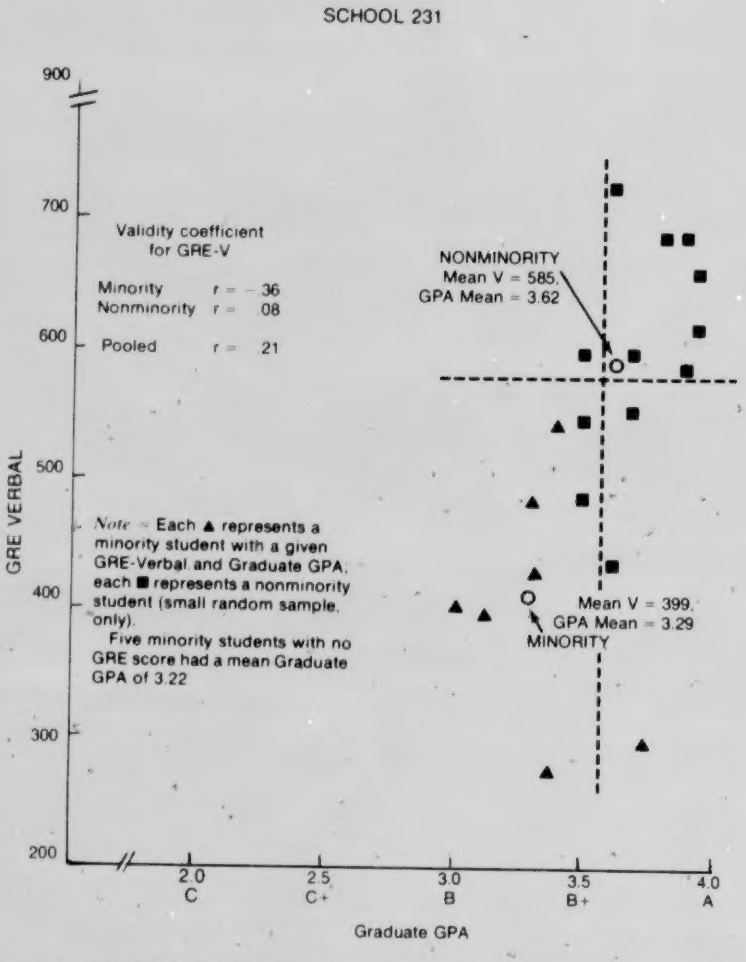
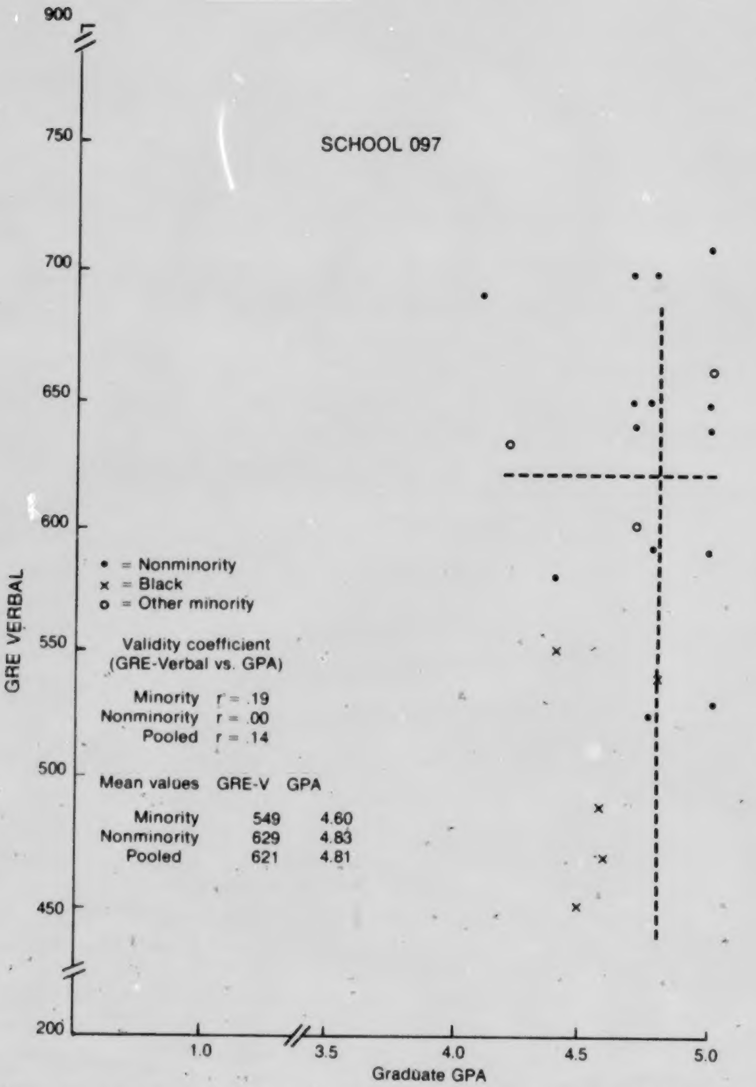


Figure 1 Plot of GRE-Verbal scores vs. Graduate GPA for minority and nonminority students in Journalism



Validity coefficient
(GRE-Verbal vs. GPA)

Minority	r = .19
Nonminority	r = .00
Pooled	r = .14

Mean values	GRE-V	GPA
Minority	549	4.60
Nonminority	629	4.83
Pooled	621	4.81

Figure 2. Joint distribution of GRE-Verbal scores and Graduate GPA for minority students and a sample of nonminority students in Psychology

THE ANALYTICAL SCORE OF THE GRE APTITUDE TEST: WHAT WE KNOW NOW

Cheryl L. Wild

As Dr. Clark has explained, the restructured GRE Aptitude Test was first introduced in October, 1977. The restructuring consisted of shortening the verbal and quantitative sections from 75 to 50 minutes and adding 50 minutes of analytical questions. In the few minutes we have together, I will briefly describe the research that led to the introduction of the restructured test and then review results on evaluation of the test after its first nine months.

First, however, I would like to review the information published by the GRE program that is available about the analytical measure. The *GRE Information Bulletin* contains a full length sample test including the three types of questions comprising the analytical score. The first step in deciding whether the analytical score measures abilities appropriately included in admissions decisions would be to review these sample questions. The *1978–79 Guide to the Use of the Graduate Record Examinations* describes the restructuring of the test and presents descriptive data (frequency distributions, means, standard deviations) for examinees taking the restructured test between October 1977 and June 30, 1978. The *GRE Technical Manual* contains sample questions, a description of the test content specifications, a technical summary of the scaling procedures, as well as sample questions that were considered but not included in the analytical measure. *A Summary of Data Collected from the Graduate Record Examinations Test-Takers During 1977–78* will be published in February 1979 and will contain average analytical scores by undergraduate and intended graduate discipline. *A Summary of Research on Restructuring the Graduate Record Examinations Aptitude Test* will be available in February, 1979 and a technical report, *Restructuring the Graduate Record Examinations Aptitude Test,* will be available in the spring of 1979. New publications, as they become available, will be announced in the *GRE Board Newsletter.*

Consideration of a new GRE Aptitude test format began early in 1974, when the GRE Board and its Research Committee began a systematic review of the GRE Program offerings. In April 1975, a model for further research and development of the test format was proposed to these groups by staff and approved in principle. The goal of this research was to broaden the Aptitude Test and thus enable students to demonstrate a wider array of academic talents. The research can be divided into three areas: (1) research on the GRE verbal (GRE-V) section of the test; (2) research on the GRE quantitative (GRE-Q) section of the test; and (3)

118

research to develop a third module, GRE analytical (GRE-A), that would allow for broadening skill measurement.

Research in all three areas focused on reliability, validity, difficulty, speededness, and comparability of the restructured to old format test sections. Technical definitions of each of these terms are presented in depth in the *GRE Technical Manual* (Conrad, Trismen, & Miller, 1977). Briefly, reliability is the extent to which a test is consistent in measuring whatever it measures. Validity is the extent to which a test measures what it purports to measure. Several types of validity exist: "face" validity, the extent to which the test questions appear to be related to the appropriate ability; "criterion" validity, the extent to which the test score is related to other measures taken at the same time (e.g., the relationship of GRE scores with undergraduate grades) or at a future time (e.g., the relationship of GRE test scores with first-year graduate grade-point averages); and "construct" validity, the extent to which test scores relate to other measures (e.g., other ability measures) in a predictable manner. Validity and reliability are interdependent—a test can be very reliable but not valid, while an unreliable test cannot be valid. Difficulty of a test is measured by the proportion of examinees who answer each question correctly. The appropriate difficulty of a test depends on how the test is used and is related to reliability. Speededness is the extent to which test scores are related to the time limits of the test rather than the examinee's ability to answer the questions. Comparability of scores refers to whether scores on two forms of the same test have the same meaning.

In the process of investigating restructuring, it was found that both verbal and quantitative sections could be revised while maintaining comparability of scores and appropriate reliability, difficulty and speededness. Correlations with undergraduate grades also suggested that the restructuring would have no substantial effect on predictive validity of the verbal or quantitative scores. The possibility of reporting reading comprehension and/or data interpretation subscores was investigated and rejected based on psychometric considerations.

While investigating whether shortening the verbal and quantitative measures was feasible, investigation of possibilities for a third new module began. Throughout the discussions on restructuring the Aptitude Test, one idea remained constant—the addition of a third module to broaden skills measured by the Aptitude Test. In early discussions of the third module, many options were considered. It was decided to focus on a module requiring minimal research for the present restructuring, while continuing to do research on theoretical measures such as scientific thinking and documented accomplishments that might be included at some later time.

119

Institutions and students were surveyed about the restructuring. Of the possible new measures listed (abstract reasoning, scientific thinking, and "study style"), abstract reasoning was favored by both faculty and students. Based on this interest, interest expressed by the Board, and the availability of item types, it was decided to try to develop a new reasoning module.

Seven item types were identified as possible components of the new module and were included as experimental sections of the GRE Aptitude Test during the 1975–76 academic year. Each item type was evaluated in terms of difficulty, efficiency, face validity, correlation with undergraduate grade-point average, and independence of verbal and quantitative scores. Based on this evaluation, three item types were chosen for use in the analytical module—analytical reasoning, analysis of explanations, and logical diagrams.

The research suggested that a score based on these three types of questions would have appropriate reliability and difficulty, measure an ability distinguishable from verbal ability and quantitative ability, and be related to academic performance. However, this information was based on research on components of the proposed analytical module, rather than the total test. In September 1976, the GRE Board reviewed the restructuring research and decided to introduce the analytical module on a provisional basis in October 1977. This decision was based on the judgment that the experimental information was sufficiently positive to warrant introduction, but that further information on the total section was required before the section would become operational.

Having reviewed the research that led to the introduction of the analytical ability measure, let us look at some of the recently obtained information on the analytical measure after the first nine months of use.

Table 1 presents means, standard deviations and correlations of verbal, quantitative, and analytical scores of seniors plus nonenrolled college graduates by undergraduate major field groupings. In general, the average analytical score falls between the averages of verbal and quantitative scores. Note, however, that for the examinees in the social sciences, the mean analytical score is higher than the mean of either verbal or quantitative scores. The correlations of verbal and quantitative scores range between .51 and .60. Verbal and analytical score correlations range between .70 and .77 while the range of correlations of quantitative and analytical socres is .64 to .73. These correlations indicate some relationship among the scores, but are low enough to indicate that each score is providing some independent information on ability of examinees.

Table 2 is based on a subset of the test-takers in Table 1. Correlations of test scores with self-reported undergraduate grades in the major field and in the last two years of college are given in Table 2. These simple correla-

TABLE 1

Correlations Among Scores on the GRE Restructured Aptitude Test for Seniors and Nonenrolled Graduates Classified by Undergraduate Major

October 1977 Through June 1978

	Correlations					
	V	Q	A	N	Mean	S.D.
HUMANITIES						
Verbal		.546	.720	23,519	536.97	123.85
Quantitative	.546		.696		505.17	115.96
Analytical	.720	.696			525.59	118.06
SOCIAL SCIENCES						
Verbal		.597	.735	61,571	489.51	117.45
Quantitative	.597		.728		493.66	118.33
Analytical	.735	.728			503.00	123.15
BIOLOGICAL SCIENCES						
Verbal		.544	.701	30,148	500.19	106.97
Quantitative	.544		.674		545.32	110.16
Analytical	.701	.674			528.58	113.39
PHYSICAL SCIENCES						
Verbal		.515	.766	21,727	506.77	124.62
Quantitative	.515		.636		657.43	106.32
Analytical	.766	.636			562.25	120.29
TOTAL GROUP*						
Verbal		.508	.723	136.965	502.75	118.75
Quantitative	.508		.686		532.99	128.01
Analytical	.723	.686			521.91	121.52

*Total Group = Humanities + Social Sciences + Biological Sciences + Physical Sciences. Total Group does not include candidates who did not code undergraduate major field or who indicated a field not included in the four categories of this table.

tions indicate that of the three scores, the analytical tends to be the most related to undergraduate grades in social sciences and biological sciences. In humanities, verbal and analytical scores are similarly related to grades. For the physical sciences, the correlation of grades with quantitative scores is higher than the correlation with verbal or analytical.

In order to evaluate whether the analytical score is adding information to that already provided by verbal and quantitative scores, multiple corre-

TABLE 2

Correlations Among Scores and Undergraduate Grades in Undergraduate Major Field and in Last Two College Years for Seniors Plus Nonenrolled College Graduates in Four Major Field Groups

	CORRELATIONS					N
	V	Q	A	UGPA-Major	UGPA-2 Yrs.	
HUMANITIES						1,507
Verbal		.580	.734	.315	.318	
Quantitative	.580		.711	.232	.275	
Analytical	.734	.711		.305	.326	
UGPA - Major	.315	.232	.305		.699	
UGPA - 2 Yrs.	.318	.275	.326	.699		
SOCIAL SCIENCES						4,032
Verbal		.626	.744	.321	.338	
Quantitative	.626		.746	.279	.304	
Analytical	.744	.746		.328	.356	
UGPA - Major	.321	.279	.328		.373	
UGPA - 2 Yrs.	.338	.304	.356	.737		
BIOLOGICAL SCIENCES						1,879
Verbal		.579	.712	.305	.282	
Quantitative	.579		.690	.259	.260	
Analytical	.712	.690		.318	.290	
UGPA - Major	.305	.259	.318		.752	
UGPA - 2 Yrs.	.282	.260	.290	.752		
PHYSICAL SCIENCES						1,498
Verbal		.566	.756	.290	.306	
Quantitative	.566		.680	.380	.395	
Analytical	.756	.680		.345	.367	
UGPA - Major	.290	.380	.345		.778	
UGPA - 2 Yrs.	.306	.395	.367	.778		

lations predicting undergraduate grade-point averages were run based on the samples in Table 2. We found that in a majority of cases, the analytical score significantly improves the prediction of undergraduate grades. Verbal and analytical scores appear to be most useful in predicting undergraduate grades for undergraduate majors in humanities, social sciences and biological sciences. Analytical scores and quantitative scores are the most useful pair for predicting undergraduate grades in the physical sciences.

In a recently completed factor analysis of the restructured test, Swinton and Powers (1979) have found that the analytical measure is somewhat unique from the verbal and quantitative measures. The study also indicates that analytical ability distinguishes the more theoretical from the more applied majors within general fields. The highest ranking groups on the analytical factor are basic social sciences, basic biological sciences, mathematics/physics, and non-language humanities—each group representing the more theoretically oriented pole of their general field.

In September, 1978 a detailed evaluation of the restructured GRE Aptitude Test was presented to the GRE Board. Based on this information the Board decided that the provisional status of the analytical score should be removed as of October, 1979. By that time interpretative information based on almost two years of test administrations will be available for inclusion in the *GRE Guide* for 1979–80. It would also be possible that by October, 1979 individual programs could have studied the relationships of graduate students' scores on the analytical measure to achievement in the first year of graduate school. To facilitate such studies, the GRE Board is initiating a new Validity Study Service, to be offered free of charge to participants. I would be pleased to send any of you further information on this service.

Third Plenary Session

Thursday, November 30, 1978, 9:00 a.m.-11:45 a.m.

GRADUATE EDUCATION FOR INTERNATIONAL STUDENTS—THE CHANGING PATTERN

Chairman: Daniel J. Zaffarano, *Iowa State University*
Cassandra Pyle, *Institute of International Education*
J. Alan Rix, *International Development Research Centre*
Sanford C. Jameson, *College Entrance Examination Board*
Michael J. Pelczar, Jr., *Council of Graduate Schools*

Daniel J. Zaffarano

This morning I am a bit overwhelmed by the magnitude of the task set before me, and fear that I may repeat the performance of the nervous American who was chairing his first international conference. He fancied himself for his knowledge of languages, but he had a rather poor memory for vocabulary. He began as follows:

Signori e Signore
Cabelleros y Dames
Messieurs et Mesdames
Herren Delegaten und. . . .
(After stumbling on unsuccessful attempts, he finally blurted out . . .)
Delegaten und Delicatessen!

I regret that I must tell you that Rose Hayden is not with us in San Diego today but is in Mexico. Her replacement, Becky Owens, called yesterday to say that she has the flu. The other members of our intended panel are actually here and are apparently in good health, so I believe that we still will have a good discussion on foreign students in the USA.

The vitality of the USA and its influence on world affairs is certainly related to the flow of energy and talent to our country because of the immigration of people from all over the world. My parents, and I am sure many of your parents or grandparents, came to this land of opportunity as children and they benefitted by the educational and vocational opportunities here. As worldwide communication improved after World War I, the lesser developed countries became aware of the standard of living in the Western world, together with the material goods our people enjoy. With the recent advent of the currency of oil in our energy-short economy, the former LDC countries have found it possible to send their children in greater numbers to the USA, and we now have a large influx of students from Iran, Nigeria, Venezuela, Saudi Arabia, as well as India, Japan and Korea.

As graduate deans, we have become uneasy about the uneven demographic distribution of foreign students within the USA, and within disciplines in our universities. Large numbers of these students are enrolling in engineering, business and the sciences. When 85% of the graduate students in a department of mechanical engineering are from other countries, we begin to have justifiable concerns. The GRADCOST study recently conducted by CGS showed that the cost of education for a graduate student usually far exceeds the assessed tuition and fees. It may cost up to $16,000 a year to educate a doctoral student in biochemistry. A typical tuition cost in a land grant university is $3,000 per year. Every foreign graduate student, therefore, receives some sort of subsidy from our institutions. Dr. McElroy told us yesterday that the highest percentages of foreign students in this country were in California (15%) New York (12%) and Texas (8%). I hope that the Proposition 13-conscious legislature of California does not become concerned about the subsidy it offers to foreign students!

Students are now coming to us from cultures and countries to which American students in the past have not typically gone. Are we giving these foreign students the experiences most useful for their futures? Are we geared to understanding their needs? Are we allowing them to perform research on problems relevant to their interests?

Does our federal government recognize the magnitude of cost that our universities assume to provide education for these students? Shouldn't our State Department subsidize these costs in a way that acknowledges the importance and value of one of our most important exports—higher education?

I am pleased to present to you now Ms. Cassandra Pyle, Vice President for Fellowship Services of the Institute of International Education. This year she also serves as President of the National Association for Foreign Student Affairs. Prior to coming to the IIE she spent 13 years at the University of Chicago, where she worked with international students and faculty. She was responsible for foreign admissions and foreign study. She is a graduate of the University of Colorado. Her subject is "The Changing Dimensions of the International Student Population."

Cassandra A. Pyle

In presenting my thoughts to you today I want to preface them by saying that I have recently attended a meeting of the Association of

Graduate Schools in Texas, and was taken aback by my own insularity in focusing so exclusively upon the concerns of international education, which of course are a primary interest to me. I realize from that meeting that there were many other issues of primary importance to colleges and universities in this country, not the least of which was the plight of the humanities and their alarming decline. However, you have asked me to come to this annual meeting and to talk about international education; this indicates an interest on your part and I would hope a commitment to look carefully at the issues surrounding international education and to take appropriate action on those issues which you think are particularly relevant to your institutions.

I regret that my colleague Rose Hayden is not here today for she, far better than I, would give you a colorful and vivid picture of the dimensions of our society's international activity. It has permeated our educational structures, which we well know; it is of course an integral part of our economic life, but it has touched us in small ways that I think are evidenced by the following statement which was part of her testimony before the House International Operations Sub-Committee in August 1978.

> "The United States is the fourth largest Spanish-speaking nation in the world today. One-third of its population growth today depends on immigration. . . . One of every fifty Americans is foreign born.
>
> U.S. agricultural exports totaled over twenty billion dollars for the fifth consecutive year. One in six Americans owes his or her employment to foreign trade. So important is international trade to our people, twenty-three states of our fifty have opened offices in Europe, three in Japan. The total value of U.S. imports and exports has topped the one hundred billion dollar mark.
>
> Direct foreign investment increased fifty percent in the period 1973–1976 to a new total of over thirty billion dollars. Volkswagen's three hundred million dollar plant in New Stanton, Pennsylvania, now employs over 4,500 people. Honda Motor Company has a twenty-five million dollar operation near Columbus, Ohio. Strange as it may seem, the Bantam book you read, the Keebler chocolate chip cookie you nibble, even the "plop, plop, fizz, fizz" Alka-Seltzer tablet you consume all have one basic thing in common—they are products of foreign-owned companies."

I share that statement with you and couple it with several quotations from a recent editorial in *Change* magazine, October 1978. In that editorial the plight of the United States and its relationship to an inter-dependent world was discussed. "American education, and Americans generally, have turned increasingly inward, understanding less and less the new circumstances of their world. . . . How to reverse this awesome incongruence between educational shortsightedness and accelerating world change should receive the study and action of the very best people—in and out of the academy." It is my perception that many of you here represent those members of the academy to which this challenge is addressed. The editorial goes on to suggest "The need for such collective and imaginative leadership stems not out of some one world idealism, but out of the clear necessity of surviving in a risk-ridden world."

Saying this, I would like to discuss those areas of international student concerns which are relevant to your own work. I should caution you again, quoting from the above editorial, that . . . "In this and other of mankind's great struggles, talk is too often substituted for action." Thus, I begin my speech to you, but I hope it may trigger some thought for substantive action.

Let me first turn to a general overview, the context in which we find international education today. The Federal government funding, much reduced from the late sixties, is now fairly stable in dollars, but the stable dollars do not mean increases annually which will compensate for inflation. In other words, we have less and less money annually for expenditures. The U.S. government support in the form of scholarships to students has been drastically reduced. AID, as well as the international lending banks, have turned their attention to the poorest of the poorest of the poor and are supporting primarily education at the elementary and secondary levels. For example, the Office of International Training Aid which in earlier years programmed as many as 4,000 students annually, is now down to some 600 who are here for academic degree programs. There are, of course, other grantees who are here for shorter term specialized training.

The watershed year for the Fulbright Program was 1968. The cuts at that time were as high as 60 percent. The program again is now stable, but an earlier high point of 5,000 student grantees at any one time in this country in the sixties has now been reduced to approximately 1,800. Foundation support is drastically reduced. The Rockefeller Foundation, long known for its institution building in certain countries in specific disciplines is now reducing, and quite drastically cutting their Development Fellowship program. The Ford Foundation which invested two hundred and forty-two million dollars in the sixties, invested this year less than four million dollars in international education. We are seeing that international education is not much of a priority within the Foundation. This is coupled with the decreasing dollar support available for any foundation efforts.

The corporate community has yet to make a substantial impact in support for international education. It simply has not figured high on their priority lists. Within the Institute, I work with one program, sponsored by ITT, which is a significant program sponsoring some 50 students annually. No other corporation has moved to make a gesture of support anywhere near this level.

Our country has no national policy on international education. Our educational and cultural activities, formerly within the Department of State have now moved to a new agency, the International Communication Agency which merges its activity with the efforts of the former United States Information Agency. The impact of the new agency, and the priority which will be assigned to education and cultural affairs is yet to be seen.

Last year the U.S. Office of Education announced a Task Force on Global Perspectives. That report, as I understand it, is somewhat inconclusive. After more than fifteen months since the announcement of the Commission on Foreign Languages in International Studies, the members of the Commission have been named. Barbara Burn, staff director for the Commission is here with us at this meeting. Ernest Boyer, Commissioner of Education, a strong supporter of international education leaves his present post in September of 1979. I have been informed by some individuals that the move to establish a Department of Education will continue; the significance of international education within that department is unsure. I am not sure that the future looks all that bright for international education. This is unfortunate because the quotations I shared earlier indicate that it is high time (and time is running out) for us to pay serious attention to international education. The world within which we live clearly demands it.

And yet I understand full well that we are asking for great attention to be paid to international education within the context of many other pressures:

- Institutions are experiencing no growth or retrenchment.
- It is a time of stabilized or declining enrollments.
- There is an over supply of faculty and under-utilized facilities.
- There have been major cutbacks in research.
- Proposition 13 has been passed in California and its impact will be felt across the nation.
- Costs of education are far outstripping income.
- There is general doubt in some circles about the effectiveness of higher education.
- There is greater demand for accountability.
- A new and older age group are entering higher education, creating additional and new demands on those who are teaching.

The global perspective for which we are seeking attention is competing with the Bakke decision not to mention concern over the decline of the humanities. You have heard from earlier comments this morning that foreign students at the postsecondary level represent less than two percent of our total population in higher education. Why then is this group so important? I would argue that it is important because the distribution of those students is such that at many of your institutions they represent a significant part of your graduate enrollment; in some departments they represent an outreach which has enriched your institutions; they represent an important link to the international community for which we are training students to live and to work.

Let me turn now to a profile of the foreign student in the United States today.

1. The foreign student population is more widely dispersed over the United States educational institutions than ever before. The newest group of institutions are the two-year colleges where there are now more than 37,000 foreign students.
2. The countries represented in our foreign student population are heavily skewed by the OPEC countries representation, many of whom are buying or consuming education and training.
3. The technical and scientific fields dominate the distribution of students.
4. Growing numbers of students are coming to this country under the support of some agency of a foreign government. They are sent for training directed towards national development needs. One factor which follows from this type of support is that there are frequently many pressures from the sponsor to provide certain types of specific training, in part because they, the sponsor, perceive of themselves as buying a specific type of education from U.S. institutions.
5. Thousands of students are entering first through English language programs, all too frequently without full or careful academic admission. Many others are entering through open-door two-year colleges. What happens then is that many students are coming in a fashion which is unplanned, unfocused, uncontrolled and frequently irresponsible.
6. However, there is an exciting new phenomena upon us; it is that of the second generation. What I mean by this is those students who came to the United States in the fifties and sixties have now returned to their home countries and are teaching and training many of those who are coming to the United States. The students coming now will again be teachers and trainers of yet another generation and that training is being obtained with the hope that soon they will be free of the intellectual dependence upon the United States, or as has been

said they will be intellectually autonomous, and can relate to us as peer groups rather than dependent groups.

7. Although there is a rise in the number of foreign students, there is clearly a diminution of support for the poorer countries. Primary education, in some cases secondary level as well, is included and help for the poorest of the poor is the primary focus for U.S. and international lending agency support.

Although the foreign students are a very small percentage nationally, they are, nonetheless, a very significant component of higher education. Twenty-seven percent of the engineering doctorates in this country are awarded to foreign students. At an institution like MIT, the percentage is as high as 45 percent. Eleven percent of all engineering degrees at all levels are awarded to foreign students. I mention engineering in particular because it is the area in which almost one-third of the foreign students are studying.

Let me tell you a bit about the distribution of students by discipline. The 1976–77 Open Doors census showed 28.8 percent of the students in engineering, 17 percent—business; nine percent—social science; and approximately five percent in each of the following: natural sciences, health, math/computer sciences, agriculture and humanities. Humanities, by the way, is down from an 11 percent distribution in the fifties. It clearly is no longer a significant field for the foreign student population. In many institutions you will find there are departments with 40 to 50 percent foreign students in a given department. You heard earlier from Dan Zaffarano that there are some departments which are almost exclusively foreign students, and would not continue without the presence of that population.

The geographic profile of students in the United States shows that three states, California, New York and Texas, have almost one-third of the foreign student population. California has the highest percentage—15, New York—9 percent, and Texas—8 percent. These are followed by high percentages in Massachusetts, Illinois, Michigan, Florida, Washington, D.C., Pennsylvania and Oklahoma.

The total number of foreign students shown for the year 1977–78 will be 235,000. This number is low, however, for it does not include students in English language training centers, and does not account for students in technical vocational schools. Of this total number 55 percent are from Asia; one-third of all students are from the OPEC countries, and within that group 36,220 are from Iran—this is 15 percent of the *total* foreign student population. In this past year the number of students from the OPEC countries increased by 66 percent. The number of Iranian students increased by 55 percent over the 1976–77 census. Other countries which represent a large percentage of students are the following:

Taiwan	5.8
Nigeria	5.7
Canada	5.4
Hong Kong	5.1
India	3.9
Japan	3.8
Venezuela	3.2
Vietnam	2.8
Saudi Arabia	2.8

As for the future it can certainly be predicted with some assurance that large numbers of students will continue to come from Iran. Within the next five years that number may increase as much as 100 percent. Another country to show great increase is Saudi Arabia. Although that country is continuing to develop its resources for undergraduate training the United States will, I am sure, continue to receive large numbers, and a new level of training will be the graduate level for it is predicted that many Saudi Arabian undergraduates may remain on for graduate programs in the United States.

Other countries continuing to send large numbers are Nigeria, with continuing and critical needs for trained human resources; Japan, with a new emphasis on undergraduate training in the United States, in part because of the value of the dollar to the yen producing such a favorable cost ratio. A number of commercial placement organizations have developed in Japan in the past two or three years, and they are making many of the arrangements for the movement of undergraduate students. Brazil has had an increase of 35 percent in the past three years. Large training programs for that country show that certainly these trends will continue. Indonesia, a country which has not sent large numbers to the United States, has shown a 53 percent increase in the past three year period. That country is showing increasing revenue and the potential for supporting higher education abroad. China, I hardly need mention for many of you know a great deal about it. The number of students will grow, perhaps gradually. The first group, some 50 students are scheduled to arrive shortly, and it is expected that approximately 100 a month will arrive beginning in January, with a total of 700 expected to be here by September of 1979. It is not outside the realm of possibility that there will be half a million or more foreign students reported by 1982–83.

Let me turn now to a new phenomena for the foreign student population. Although I have very little hard data about the growth of large numbers of married foreign students, I know from direct observation and comments from many of my colleagues, that this phenomena is occurring with great rapidity. More frequently than in the early 1970's and certainly the 1960's, the foreign student is married and the spouse accompanies the student. This phenomena is compounded by the fact that many married couples have one or more children. The highest percentages seem to come from the Middle East, followed by Asia, Latin America and Africa.

Let me show you the impact on only one campus, Michigan State University. In the 1977 census at that campus, they had a total of 1,293 foreign students; 573 were married, 195 of the married students were from the Middle East; 57 had no children or had none with them in the United States. Of those who had children here, the number for that geographic area group was 186. For the entire group there were 435 dependents and children. This is a substantial increase to the initial number of foreign individuals on the campus. Now what are the ramifications of a large married student population? There are wives; frequently they need English. All too often they have F-2 visas and cannot work, representing financial problems. They frequently become bored and because of children they are unable to go to the English language programs. Children, as we all know, are costly. There are medical needs. The day care centers too often exceed the financial resources of the student. Schooling for many children is becoming an increasing concern. A number of public secondary and elementary school systems are talking about charging special tuition.

The impact of the foreign student, married or single, does not end here. The entire community is being confronted more directly than ever before with cross-cultural adjustment. As the value of international education is viewed in the campus setting, many of us have tended to think categorically and very generally about the obvious value of students to the community. We have learned about their cultures and they about ours. The traditional acceptance and enthusiasm for the foreign students continues, but rapid increase in populations, particularly for a given geographic area produces many strains, and it is not all as positive as we might like to have the impact be.

A number of you are aware that within the last year a very difficult situation erupted in Trinidad, Colorado. Students there were in an English language program at a two-year college. Many of the students were from Venezuela and the Middle East and those geographic areas came to odds with the town where the citizens involved included a high percentage of Chicanos. The cultures got in the way and the end results were not positive. I cite this as only one example. There are many, many others and I am sure a number of you have had direct experience with them or have heard about them from your colleagues. If the projections for the increase of foreign student enrollment are true or even minimally so, the institutions need to think very seriously about how they will respond to the trend.

Unlike the early 1970's institutions are no longer hurting for space. They are eager to fill empty classroom spaces and empty dormitory rooms. Recruiting of foreign students has become fair game. This activity is most actively played in the Middle East, but certainly in Latin American countries, in Japan, and other parts of Asia, there is a good deal of activity. It may be that many of you here are not directly involved and maybe your institutions are not, but I do want to bring to your attention the serious problem of recruiting and head-hunting.

Let me point out that recruiting is not solely the work of the admissions office; individual departments are often involved, and all too frequently it is a high level administrative decision to recruit directly. The challenge to you and your institutions is to be responsive to the educational needs of countries, but to be responsive in a way that your action is responsible for the long-term needs of the students and the countries, and that the standards by which you are responsive are of the highest order. I am not sure that institutions are willing to forego the admission of foreign students for the sake of high standards, or perhaps I should say that *not enough* institutions are willing.

Let me just focus a moment on Iran. I know this is a country of much concern to many of you. There are presently well over 35,000 foreign students, more are undergraduate than graduate, but the graduate numbers will continue to grow. Considering the recent developments in Iran, we have every reason to believe that students from that country will be clamoring to exit from the country, and the United States is clearly an easy entrance point. The universities are presently closed in Iran; an exam which screened out a number of students, the EZZAM, has been lifted and is no longer required for exit. Open transfers from Iranian institutions and those outside the country have been approved; we are told that visas are issued by our U.S. government officers with great ease. Initially, at least at the current time, monies seem to be there to cover the students and they can show they have sufficient funds to study abroad. (All too often that situation changes once the students are here.)

Many students seem to be finding entrance with ease; many initially are going to English language centers and junior colleges, but as you know they will sooner or later be winding up at graduate institutions. Let me say to you, it is not the government of Iran which is admitting these students to your institutions. Those decisions are being made within, in your own institutions by your admissions officers, your departments, your graduate deans, and perhaps being aided and abetted by senior level administration.

I mentioned earlier that many of the countries were "buying education". It is now, I am sure, perceived by many as an important consumer product in the United States, perhaps our most desirable export. It is a hard balance to achieve between providing a consumer product which can be purchased and offering a sound educational experience. Some institutions new to the international field find themselves with one or two hundred foreign students all from the same country, or at best only a few students from other geographic areas. The geographic imbalance at some of our campuses often turns to haunt those institutions. Something has clearly gone wrong and only by broad and balanced institutional policy can we correct such problems. A continuation of a short-term reactive response as opposed to long range planning will compound the complexity of problems which must be resolved. It is at your level with the faculty and at senior levels of administration that the prime responsibility rests for this planning.

"Most universities have admitted foreign students with the assumption that they would take the same curriculum and courses provided for the U.S. students." This is not my statement, but it is a quotation from a 1977 report prepared by Michigan State University on behalf of the National Association of State Universities and Land Grant Colleges. That report was referring specifically to the field of agriculture, a very important field for international education. The report said that there appeared to be at present time "little flexibility provided in the curriculum to date." Let me cite an interesting letter I received recently from Brazil about this matter.

> "If there is any criticism of the general nature about the U.S. training, it is that some of the specialized post-graduate programs in American universities do not meet Brazil's current needs for development. A repeated comment by Brazilian officials working with education and manpower training about universities in the United States is that our institutions are inward looking and not willing or able to mold programs for the needs of Brazil, thus a Brazilian student holding a B.A. from the United States may have difficulty fitting his education into the Brazilian pattern. A broad recommendation that could be made for making U.S. institutions of higher learning more responsive to Brazil's current manpower needs is to attempt that it be more flexible in designing courses of study for the Brazilian graduate student. Although Brazilian students should certainly be held to the same rigorous academic standards as their American counterparts, the hosts institutions should make themselves more open to Brazilian development needs and attempt to create programs for individuals."

That quotation, however, could come from any number of countries. The concern is world wide. I am very pleased that CGS has currently joined with NAFSA in a project which is surveying the extent of the development of responsive and flexible programs for foreign students. I hope the findings will provide guidance for changes and new initiatives for I would argue that by-and-large our colleges and universities still remain national in character and the more national they remain the less useful they will be to a nation which is daily making its way in an interdependent world. It is the future planning that is important for us. An analysis of our present shortcomings is an important step in that planning.

As we talk about relevant curriculum it is imperative that we talk also about the need for the U.S. student to be taught in an environment where their own experience will also be relevant to an experience which goes well beyond the geographic boundaries of the United States.

The faculty, in my opinion, hold the greatest responsibility for relevance, but not all faculty care as much about that issue as others. As I heard recently in a symposium, there is no strong reward system for the teaching of foreign students. The foreign student frequently does not bring in research dollars, and sometimes a student is not in a field of particular interest of the faculty. There are also language barriers and yet, faculty are at the front line of the delivery system of education. It is here I ask your support to move the entire academic community to address these issues. At many institutions where there is this resistance there are faculty members in the same department or graduate division seeking foreign government contracts or expressing great interest in having large numbers of foreign students. Who is communicating with whom within your institution?

Our system of higher education is viewed by many governments as a product to be purchased. Indeed higher education may well be our most exportable commodity; more marketable abroad than our economic order, political structure or cultural environment. I would challenge you with a thought that the price at which we offer this education abroad must be determined by some rational process and not the rich should pay, or whatever the market will bear philosophy. I say this because there is a growing discussion of tuition differentials for foreign students. I would argue that this may not be an appropriate way to approach this issue. I would urge you, as an association, to look carefully at the issue of tuition differentials and to develop sound policy guidelines as to what is a responsible response to foreign governments as they press us to admit their students.

As many of you know, Canada and some European countries are moving in this direction. There is an important difference, however. In other countries the increase in tuition, although representing a major departure from past practice, does not represent a significant increase in dollars. In the United States many institutions considering, or already exercising a differential tuition fee, are imposing an increase, sometimes sizeable, upon an already sizeable tuition charge. The balance between covering a larger percentage of educational costs and the inclusion of an international student/scholar population and the many benefits which result from that population is delicate, perhaps even precarious.

Much of what I present today speaks to the problems, the challenges and some of the real dilemmas which our institutions now face in charting a course and establishing policy for international students. As many of you may know there have been earlier meetings and symposiums and well written reports on the role of the university *vis à vis* the foreign student. A number of the recommendations from those earlier reports might well be cited here today, for they are still timely. As I read back over many of these reports within these last few months, I felt some disappointment and indeed some frustration that our subsequent actions to the articulation of recommendations had produced far less than might have been expected given the importance of the issue.

It is my opinion that time is running out and the luxury of simply discussing and writing about these issues only to be bogged down by other institutional pressures which inhibit change is a pattern which cannot long continue if we are to respond effectively to the "need for collective and imaginative leadership" which, as the *Change* magazine editorial stressed, was needed for survival in a "risk-ridden world". Your association is one such group which can begin to address these issues and which *can* make some of the changes so clearly needed for the future.

I should like to return to this group in five years, not to talk again about the needs I have listed today, but to talk about the progress we have made in addressing them.

Daniel J. Zaffarano

Our next speaker is Allen Rix. He studied history and theology at the University of Toronto and did graduate work at the University of London. He was Executive Director of the Canadian Bureau for International Education from 1968 to 1977. He then went to the International Development Research Center as Director of Pearson Fellowships and later became the Senior Program Officer. The IDRC is a Canadian Government funded organization, supporting research projects and exchange programs with developing countries. He will tell us about the situation in Canada.

THE IMPACT OF FOREIGN STUDENTS ON GRADUATE EDUCATION: A CANADIAN PERSPECTIVE

J. Allan Rix

The greatest benefit of being a member of a panel discussing any topic is that because there are so many of you, you can't waste your time dishing out statistics. You can be almost superficial. How do you begin to describe the "Influence of Foreign Students on Graduate Education?" To describe the Canadian scene is in itself a formidable task. So, instead of wasting time trying to think of a clever beginning, I'll launch out into the deep by indicating clearly that the story may be framed as one of those dreadful jokes—"I bring you good news and bad news".

I think your experience in America with foreign students has been of longer duration than ours in Canada. We have, however, one advantage (or disadvantage) that you have not had. One of our greatest blocks of students and one of the greatest influences on our scene (for better and for worse) has been American students. Together with the students from Hong Kong, American students accounted for over 50% of the total foreign student population.

The period of the late 50's and early 60's in Canada, as elsewhere in the Western world, was one of tremendous growth—we built schools, colleges, universities, hospitals, factories, subways, parking lots. Whatever it was we needed—we built it.

Our population in Canada was not large enough to support the massive development program that was then in operation. It was an era of considerable immigration into Canada and our doors were open to thousands of people. Foreign students were part of this movement, and the early statistics we have on foreign students place all non-citizenship people in this category. We included both visa holders (classified as tourists) and landed immigrants as students provided they were enrolled in a university or college. We encouraged them to stay in Canada as citizens after they had completed their academic study or training. They were given preferential treatment in immigration matters because they were graduates of a Canadian educational institution.

New universities were established; new departments were founded; and graduate studies appeared everywhere across Canada. What was not seen was that in many instances certain programs became almost totally non-Canadian.

This was true especially in arts and sciences, and in engineering. This fact became by the early 1970's a problem of political importance for the following reasons:

1. The costs of education became staggering, and it was being met almost totally from taxation revenue;
2. We no longer needed the science, commerce, business and engineering graduates in the 1970's that we had needed in the 50's and 60's. The cry came to "rationalize" graduate studies; and to curtail those areas in which Canadian students showed little or no interest.

However, the first steps have been more selective and that brings me to what I consider to be the five chief results of foreign students on graduate education in Canada.

137

The cost of supporting the postsecondary system in Canada is very high, and because many of the students were "foreign", the governments decided that "out of the country fees" were the answer. You have these fees, and a large section of the student population was American so you could not object. The fees arrived but to be fair, we must say that they have not increased greatly the cost of education for the individual. I believe graduate education in Canada is still a bargain when compared to similar programs in your country.

The second is basically good news—the range of courses and fields of study available was greatly increased and this enabled thousands of Canadians to pursue graduate work without leaving Canada or without travelling far from home at great cost.

With this advantage came an unwanted side effect mainly in the sensitive areas of academic life—the humanities and social sciences. The people needed to staff these new centres were too often, of necessity, either American trained, or American and they gave little or no attention to Canadian history and experience. This led to the inevitable anti-American reactions of the 1970's that some of you may have experienced and not liked.

The quality of teaching is a third factor I wish to mention, and here I rush in without the angels. I firmly believe "that what a hundred can enjoy, a thousand will destroy". When I listen to our award holders talk about their experiences in graduate schools, around the world, I cringe:

- lectures of 300 people
- seminars of 25 people
- markers hired to evaluate graduate students papers being paid to mark one every 20 minutes
- clear indication that if somebody will pay the bill, some graduate school will take the body

What has improved is the wealth of experience that is now available to students and faculty, if they wish to make use of it, to study and compare different systems of thought and experience on a world scale.

The fourth result is increased government intervention in university matters. Our Federal department which controls visas and work permits tried recently to force universities to have only Canadians hired as teaching assistants rather than allowing the universities to decide who were the best qualified for these positions.

Because of the furor caused by this proposed action, the government withdrew for a while, but I'm certain they will be back with a more subtle proposal in the near future.

We have a new immigration act that is severe in its implications for foreign students: visas are required for all, total funding is the order of the day and no transfer between academic institutions without prior permission from them is allowed. These are some of the new requirements of the act.

The fifth result has been a tying of Canadian universities to institutions around the world, and this is good news. The universities in Canada may lack the national structures and expertise to build on these ties, but I hope that can be solved. There are clear indications that universities in developing countries require assistance at the graduate rather than the undergraduate level. The International Development Office, recently established, should assist the universities in their contacts with appropriate institutions in developing countries. I.D.R.C., itself, is viewed by many as a useful link between Canada and the researchers of developing countries.

Finally, let me indicate that on our horizon hangs a neat little cloud, that in your country, I gather, has produced a cloudburst—contract education for oil rich nations.

Some organizations in Canada are now involved in supplying, through the universities, educational training at the undergraduate level for students selected by their own governments. After this, will come requests for special training at advanced levels—all of which will be tailored to fit the users needs and purse.

I fear that the picture I have painted may look a bit gloomy to you, and in closing I want to turn the light on over the canvas, stand back, and say that on balance it has been a good experience. We have lived through it.

Daniel J. Zaffarano

Sanford C. Jameson went to Miami University in Oxford, Ohio as an undergraduate and then to Case-Western Reserve for graduate work in educational psychology. Later he was Director of Admissions and foreign student advisor at Carleton College in Northfield, Minnesota. He has been on the staff of the College Board for 15 years, where he is now Director of International Education. He is the past president of NAFSA, and is on the program staff of TOEFL (Test of English as a Foreign Language). Sandy's topic is "Inter-Association Activities."

INTERASSOCIATIONAL ACTIVITIES OF THE COUNCIL OF GRADUATE SCHOOLS WITHIN THE FIELD OF INTERNATIONAL EDUCATION

Sanford C. Jameson

I have been asked to review some of the international activities of the Council of Graduate Schools which relate to other educational organizations.

One of the prime, long-standing interassociational activities of the Council of Graduate Schools (CGS) is its participation in the National Liaison Committee on Foreign Student Admissions (NLC). The NLC is a group of five organizations interested in international educational interchange especially at the postsecondary level. Member organizations are the American Association of Collegiate Registrars and Admissions Officers (AACRAO), the College Board, the Council of Graduate Schools (CGS), the Institute of International Education (IIE), and the National Association for Foreign Student Affairs (NAFSA). Their stated purpose is to provide "at the national level a means for exchanging information, coordinating plans, and acting jointly or in concert on matters affecting foreign student admissions and related issues, to the extent that this is in the common interest of the constituent organizations." The NLC is over twelve years old.

Several major projects that are conducted under the auspices of the NLC are funded by the International Communication Agency's Directorate for Educational and Cultural Affairs (formerly the Bureau of Educational and Cultural Affairs of the Department of State, CU). Contractual arrangements are made between this agency and one of the member organizations to conduct the specific activities proposed for the NLC project under consideration. Project activities are carried out usually on a volunteer basis by members of the five organizations, and staffing of the projects is accomplished through the contractual arrangements.

The ten-member "NLC" is the parent group which determines which proposed projects are to be sponsored by the NLC. Two representatives from each of the five member organizations serve on the parent committee. CGS representatives for 1977-1978 have been J. Boyd Page and S. D. S. Spragg. At least one committee member from each organization is a staff person, thus providing continuity.

Individual terms of service on the NLC are determined by the constituent organization which the person represents; e.g., AACRAO determines who will represent AACRAO on the NLC and for how long. The statement of organization states that terms are for one year, but there is no limit on the number of one-year appointments, so in practice the constituent organizations determine the length of service for individuals on the NLC.

Activities of funded NLC projects are supervised by advisory committees appointed by the NLC, usually with one representative from each constituent organization. Minutes of advisory committee meetings as well as reports on the various projects are distributed to the NLC. Dissemination of this information to the memberships of the constituent organizations is the responsibility of the ten members of the parent committee.

Chairmanship of the NLC rotates among the various organizations. The current chairperson is Mary C. Martin (Director of the Office of International Student Services of the University of Chicago), representing NAFSA. The Office of International Education of the College Board serves as the permanent secretariat for the NLC.

The National Liaison Committee on Foreign Student admissions got its start in the Midwest in the early 1960's when a group of people from AACRAO, the College Board, IIE, and NAFSA began meeting informally to exchange information about their activities in the field of foreign student admissions. Several foreign student admissions workshops were conducted jointly by this group, and in 1968 the Council of Graduate Schools joined them to conduct a colloquium at Wingspread Conference Center in Racine, Wisconsin.

COLLOQUIA ON FOREIGN STUDENTS IN THE UNITED STATES

The NLC has sponsored a series of colloquia on the foreign student in the United States, and reports of these colloquia have been widely distributed. Funding for the reports came from ICA, and the Johnson Foundation provided space and meals for the participants at Wingspread. Planning committees for each colloquium were appointed by the NLC as the need arose. The colloquia are listed below with the publication dates of the reports:

University, Government, and the Foreign Graduate Student, 1969;

The Foreign Graduate Student: Priorities for Research and Action, 1971;

The Foreign Undergraduate Student: Institutional Priorities for Action, 1975; and

The Foreign Student in the U.S. Community/Junior College, 1978.

OVERSEAS WORKSHOPS AND CONSULTATIONS PROJECT

Another major project of the NLC is the Overseas Workshops and Consultations Project whose purpose is to provide accurate, current information about higher education in the United States to those persons advising prospective students overseas. Topics discussed at the workshops include admissions, financial aid, and student advising for foreign students; and participants include personnel from binational centers, Fulbright Commissions, USICA posts, US Embassies, and private agencies concerned with prospective foreign students, as well as representatives from ministries of education and foreign universities. This project is funded under a grant from the Directorate for Educational and Cultural Affairs of the International Communication Agency to the College Board for the NLC.

Follow-up consultation visits are made to participating countries by the workshop faculty after the workshop. The purpose of these visits is to assist the local missions in providing services and information to interested students and to improve communication with the ministries of education and the educational communities within the countries.

The first cycle of workshops and subsequent consultations began in 1971 with a program conducted in Bangkok, Thailand, involving participants from South and Southeast Asia. Seven workshops were conducted in all parts of the world in the first cycle of programs which ended in 1974. A second cycle of shorter workshops and longer country consultations in smaller geographical areas began in 1975 with a three-day workshop in Kuala Lumpur, Malaysia. The worldwide coverage of the first cycle should be accomplished by the second cycle also. The most recent workshop was held in Nairobi, Kenya in November 1978.

The Advisory Committee for this project is comprised of G. James Haas, Indiana University; Homer D. Higbee, Michigan State University; J. Boyd Page, Council of Graduate Schools*; Cassandra A. Pyle, Institute of International Education; and Leo J. Sweeney, University of Missouri at Kansas City. Sanford C. Jameson of the College Board is the project director, and Mary Ann Spreckelmyer of the Directorate for Educational and Cultural Affairs represents the International Communication Agency.

Several interesting spin-offs from the NLC Overseas Workshops and Consultations Project stem from recommendations made by workshop participants or from requests from overseas missions directly to the NLC. The *Overseas Counselors' Manual* was developed under the leadership of the advisory committee for this project and with the assistance of a selected group of overseas counselors who work with prospective foreign students. It was published for the NLC in 1976 and has been distributed widely around the world. Members of the advisory committee also assisted USIA in the production of the film, "If You Want to Study in the United States" which is used by most posts overseas. Several consultants have made extended visits to countries or regions that requested them following the regular workshop/consultation visit program. Funds through a grant from ICA have been made available for an NLC consultant to work full time in 1977-78 on improving counseling services for students in the Middle East.

CREDENTIALS EVALUATION PROJECTS

The NLC Credentials Evaluation Projects are among the oldest activities of the NLC. Degree-granting institutions enrolling fewer than 50 foreign students are eligible to use this free evaluation service for purposes of admission. Volunteer evaluators are experienced admissions officers from all over the U.S. who have expertise in evaluating foreign educational credentials for both undergraduate and graduate applicants. There are four regional projects serving colleges and universities in the Midwestern, Northeastern, Southern, and Western sections of the United States.

---

*In 1979, Michael Pelczar will represent the Council of Graduate Schools on the NLC Overseas Workshops and Consultations Project advisory committee.

The projects are administered by NAFSA through a grant from the Directorate for Educational and Cultural Affairs of the International Communication Agency. The steering committee for this project is composed of the four regional project coordinators, the chairman of the NLC or his/her designate, and *ex officio* the appropriate NAFSA staff. Reports and other information are distributed to the NLC parent committee members by the NAFSA staff.

INFORMATION CLEARINGHOUSE FOR FOREIGN STUDENTS

The need for a better fit between foreign student and U.S. institution, thereby ensuring a better experience for both student and institution and therefore better international relationships, has been recognized for quite some time. This point had been reiterated at the overseas workshops, and participants had requested assistance in providing students with a workable number of institutions from which to choose.

In April 1975 the National Liaison Committee appointed a committee to study the feasibility of a computerized information clearinghouse for foreign students. The main objective of the clearinghouse would be "to provide direction without destination to prospective foreign students . . . to narrow down the universe of 3000 U.S. institutions for the inquiring foreign student."

Funds were granted by the Bureau of Educational and Cultural Affairs through the College Board for the NLC to conduct a field test in five countries in 1977-78. Phase I of the field test was completed by the study committee members and College Board staff members working on the project in November 1977, and Phase II began in January 1978 with follow-up and evaluation in three of the five countries. An operational part of the project started in the summer of 1978 and involved 12 countries. The service will be offered to prospective students in these 12 countries and information from the students will be processed through monthly runs. If this year's experimental operational phase is successful, the service will be offered on a world-wide basis in the future. The CGS representative to the NLC Information Clearinghouse advisory committee is Herbert Rhodes, Dean Emeritus of the Graduate School, University of Arizona.

143

NATIONAL COUNCIL ON THE EVALUATION OF FOREIGN EDUCATIONAL CREDENTIALS

Another interassociational activity of CGS is membership in the National Council on the Evaluation of Foreign Educational Credentials (CEC). Established in 1955, the 23-year old Council develops guidelines on the evaluation, placement, and admission of foreign students based on their educational background at the undergraduate and graduate levels. These placement recommendations are usually published in the AACRAO *World Education Series*. The current representative to the Council from CGS is Andrew Hein, Assistant Dean of the Graduate School, University of Minnesota.

TOEFL POLICY COUNCIL

The Test of English as a Foreign Language (TOEFL) Policy Council is constituted by the College Board and the Graduate Record Examinations Board (GREB). The current representatives for GREB are Phyllis P. Bober, Robert F. Kruh, and Milton Lipetz. This also effectively represents the leadership of the Council of Graduate Schools. This program is, of course, a very important part of the foreign student admissions process when the applicant's native language is not English.

This, of course, is only a brief overview of the Council of Graduate Schools interassociational activities within the field of international education. It does not include the Council's long involvement in AFGRAD and CGS's long-standing relationship with the Institute of International Education (IIE). The emphasis has been primarily on the area of students and foreign student admissions which, of course, does not include the other international educational activities such as area studies, language programs, and such.

One point which I hope has become clear is that educational associations can accomplish a great deal by working together within the complicated field of international education and educational exchange. I find it very encouraging to see the interest and involvement of many graduate school deans in these activities. I look forward to working closely with the Council's newly established Committee on International Education.

Daniel J. Zaffarano

Our last speaker is the President of CGS—Mike Pelczar. He will describe the future involvement of our organization in the study of the foreign student problem and tell you about the committee he has just appointed to give us some guidance for the future.

THE FUTURE INVOLVEMENT OF THE COUNCIL OF GRADUATE SCHOOLS IN INTERNATIONAL EDUCATION

Michael J. Pelczar, Jr.

Before commenting upon future CGS activities in the field of international education, it may be worthwhile to review briefly our past involvement in this area of graduate education.

Approximately fifteen years ago and shortly after the establishment of the Council of Graduate Schools in the United States, CGS together with the College Board, the National Association of Foreign Student Affairs, the Institute for International Education, and the Association of College Registrars and Admissions Officers, established the National Liaison Committee (NLC). You have heard from Dr. Sandy Jameson this morning about the NLC in countries all over the world.

CGS plays a major role in the AFGRAD program (African Graduate Fellowship program). Indeed, President Emeritus Arlt chairs the AFGRAD Committee on which several graduate deans serve. There is a special meeting of this group scheduled during our meeting here.

A few weeks ago, we sent a memo to the entire CGS membership informing you of the establishment of a Presidential Commission on Foreign Languages and International Studies. Dr. Barbara B. Burn, newly appointed Executive Director of this Commission is in the audience and perhaps will wish to tell us more about the Commission. I mention this new development as one example of activities which point to greater interest and a very likely expansion of programs in international education.

Dr. Daniel Zaffarano, who serves on the Executive Committee, took the initiative to bring together information on the various organizations that have been and are involved in international graduate education. At the request of Dean White, our Chairman, two summary reports of CGS involvement in international education have been prepared; one by President Emeritus J. Boyd Page and the other by Dean Shirley Spragg.

The Executive Committee proceeded with the recommendation to establish a Committee on International Graduate Education. I am pleased to report at this time the membership of this Committee.

Dr. Jules B. LaPidus—Chairman
Vice Provost for Research and Dean
of the Graduate School
Ohio State University

Dr. Johnetta G. Davis
Associate Dean of the Graduate School
for Student Affairs
Howard University

Dr. Stirling L. Huntley
Associate Dean for Graduate Studies
California Institute of Technology

Dr. William H. Macmillan
Dean of the Graduate School
University of Alabama

Dr. Kenneth R. Wadleigh
Vice President and Dean of the
Graduate School
Massachusetts Institute of Technology

Dr. Philip Schmidt
Associate Dean of the Graduate School
University of Texas, Austin

Some of the topics suggested by the Executive Committee to this new Committee for their consideration as tasks which they might pursue include:

1. Historical Perspectives; where we have been and where we expect to go in international graduate education.
2. Assessment of the present situation; availability of data; determination of voids in data; how to fill in needed information.
3. Projection of trends for the next years.
4. Curriculum for international students.
5. Recommendations: e.g. Improvement of admissions and procedures; university/federal government cooperative efforts; financing arrangements, etc.

The work of this Committee can result in information and, perhaps, recommendations which will be of great value to our membership. We wish them well as they initiate their program of action.

Fourth Plenary Session

Thursday, November 30, 1978, 1:30 p.m.-3:15 p.m.

A DEFENSE OF AFFIRMATIVE ACTION IN GRADUATE AND PROFESSIONAL PROGRAMS

Chairman: Albert W. Spruill, *North Carolina A&T State University*
Guest Speaker: Kenneth S. Tollett, *Institute for the Study of Educational Policy*
Reactor: Geraldine R. Waters, *Coppin State College*

Albert W. Spruill

Good afternoon ladies and gentlemen and a hearty welcome to the fourth plenary session. I am overwhelmed with pleasure over the opportunity to greet you on this occasion, not so much because I have been invited to stand in for a colleague, but because I come to California and to this august gathering for the first time as a full-fledged member of the Council of Graduate Schools in the United States.

In the outset, I believe it is fitting that we make some corrections in your program as it is printed. I am not Dean Leroy Bell. I am not from Alabama State University and as lofty as the title may seem, I am not President of the Conference of Black Graduate Schools. My name is Albert W. Spruill. I am professor of education and dean of the Graduate School at North Carolina Agricultural and Technical State University in Greensboro, North Carolina and I have served in past years as an officer in the Conference of Southern Graduate Schools and on the Executive Committee of the Black Conference of Graduate Schools.

This brings me to the theme of this session which is "A Defense of Affirmative Action in Graduate and Professional Programs" which I should like to introduce and thence to introduce an expert who will sound the trumpet in its defense.

The philosopher Boyd Bode once said that "Democracy is a social organization which strives for the self improvement of all of its members on a basis of mutual equality." This is a high sounding description of what we are all about in this country when we talk of freedom and equality for all. We know, however, that in no area is it more evident that we have unfinished business than in the area of advanced education. One of the great tragedies of our society is the awful spectacle we have made in providing opportunities for the underrepresented in our culture to receive masters and doctorate degrees. It amazes me no end to hear the powers that be say that we should curtail production at the advanced level when we have barely scratched the surface in the preparation of women, Blacks, Chicanos, Orientals and other minorities in the United States.

It is not my role to defend affirmative action programs. Rather, I am to set the stage and allow one to wade in who has studied the tide and can assess the currents. Our speaker for this occasion is Dr. Kenneth S. Tollett, Director, Institute of Educational Policy at Howard University in Washington, D.C.

Dr. Tollett is a Distinguished Professor of Higher Education and serves both as Chairman of the National Advisory Board and Director of The Institute for the Study of Educational Policy at Howard University. Dr. Tollett received his A.B., J.D., and M.A. degrees from the University of Chicago. Before assuming his current positions he served as Dean and Professor at the Texas Southern University School of Law, Visiting Fellow at the Center for the Study of Democratic Institutions, Visiting Professor at the University of Colorado School of Law, and a member of the Carnegie Commission on the Future of Higher Education.

Dr. Tollett is a member of several educational and professional committees and organizations, among which are the American Bar Association (Special Committee on Prepaid Legal Services,) Vice Chairman of the District of Columbia Commission on Postsecondary Education, the National Advisory Committee on Black Higher Education and Black Colleges and Universities (HEW), and the Visiting Committee of the Graduate School of Arts and Sciences at Harvard University.

Dr. Tollett has authored over forty-four major papers for civic or professional meetings and conferences and published over forty articles in various books, periodicals and professional journals.

It is now my esteemed pleasure to present to you, Dr. Tollett.

A DEFENSE OF AFFIRMATIVE ACTION IN GRADUATE AND PROFESSIONAL PROGRAMS

Kenneth S. Tollett

I. Introduction

It is a pleasure to be here to speak to you this afternoon on "A Defense of Affirmative Action in Graduate and Professional Programs."* I have

---

*The substantial assistance of Joan Tunny, my Research Assistant, in the preparation of this paper is gratefully acknowledged.

148

had some difficulty getting prepared for this, because I suppose like most of you I have been giving considerable amount of time, thought, and attention to the disaster in Guyana. In fact, I see all kinds of connections in things that you might not expect one to see. I look upon graduate schools with special affection because I know that they are centers which nourish research. When I started my academic career I was very much committed to research. However, because I was early dragooned into becoming a Dean, I got deflected and I never completely got back on the track. It just so happened that before I got deflected I was trying to study the role of religion, science, art and law in social ordering. Thus in the past, although not now, I have spent much time looking at cults and religions.[1] Graduate education is traditionally committed to the rational pursuit of knowledge and the counter-cultural reaction to this in the 60's may have planted seeds of anti-rationalism which grew into the kind of excesses which took place in Guyana. We know that there have been many instances in history where madness of this sort took place. I told you I see connections in many things and you will see this later when I try to give a theory to try to explain what is happening in this country. There is a part of my theory which coincides, I think, with some of the problems of this recent event. My speech is not in as polished a form as it otherwise would have been if I had not spent so much time watching television and reading newspapers about this event and trying to figure out what is going on. I will say some more about that later, but I am sure it has been on your minds also.

The remaining remarks will consist of four additional sections. In the second section I will discuss the forces behind the assault on affirmative action. In the third section I will say a few words about the Institute and its publications because they form the background for all of my remarks. In the fourth section I will review the status of Blacks in higher education. In the fifth section I will give an explicit defense of affirmative action programs in higher education.[2]

II. Forces Behind Assault on Affirmative Action

There is an emerging changing mood in our society which manifests itself in many negative forms, one of which is an assault on affirmative action and special minority admissions programs. This changing mood is the product of three converging and reinforcing forces. All three forces have been closely identified and associated with higher education.

The first force is the product of tired, unnerved, and jaded intellectuals, pundits and some public officials who now feel that governmental and other efforts for social reform can accomplish more by doing less. Social activism is perceived as part and parcel of certain events of the 1960's and early 70's which they would like to repress and reverse. The events were the civil rights demonstrations of the 1960's, the protest against the Vietnam war, the ecology movement and the feminist movement. All of these movements are closely associated with and related to governmental efforts to try to make universities respond to the needs and interests projected by them. Affirmative action symbolically, subliminally, and substantively expresses an extension and continuation of some of the government's efforts to do justice in the areas for which these events provoked, stimulated and demanded reform.

The second force is related to the first in that it grows out of the findings of a number of researchers who question the correlation between educational input such as curriculum, faculty and buildings and educational outputs such as students proficiency and achievement. The Coleman Report, Jencks' *Inequality*, Banfield's, *Unheavenly City*, and other similar or related studies suggested that the victim of oppression is either primarily responsible for his predicament through the forces or circumstances of his neighborhood, family, parents or personal attitudes, or simply the unhappy object of unfathomable, haphazard, and intractable forces. If one takes that view, of course, then one should not take positive steps to try to improve circumstances because they will not make a difference. Banfield even goes so far as to say that one is not in the lower class, one is not poor because he does not have money, but he is poor because he has a bad attitude. That may be simplifying his notion of the problem of class. He goes on to say that one is in the lower class because one cannot postpone present benefits or pleasures for future gains.

The third force is a revival of interest in the genetic thesis or the inheritability of intelligence. A few months ago I was at a meeting sponsored by the American Academy of Arts and Sciences to discuss status reports on minorities. One of the gentlemen at the meeting, who was discussing with us how to design this research project which is to result in an issue of *Daedalus*, pointed out something to me that was very surprising. He said that for the first time in years at the Harvard Faculty Club there is serious and animated discussion of the genetic thesis regarding intelligence. Discussions that he did not hear at all in the 60's or even early 70's but now are going on.

Two particularly unfortunate developments have been produced by the above forces, namely, the assault upon affirmative action in general and upon special minority admissions programs represented by the *Bakke* case in particular. Thus, although *Bakke* did not technically and constitutionally outlaw or even put into jeopardy affirmative action, it nevertheless parallels and coincides with the neoconservative movement of the late 60's and early 70's which is epitomized by Nixon and his efforts to reconstitute the Supreme Court so that it would go against the egalitarian humanism of the Warren Court. Affirmative action today cannot be disassociated from the over 200 years of slavery and 100 years of second class citizenship and the stark difference between the wellbeing of Blacks and whites.

It is at best a rationalization and at worst a callous capitulation to racism and a selfish unconcern for the welfare of Blacks today to say that today's generation has absolutely no responsibility or obligations growing out of the past oppression of and discrimination against Blacks. Blacks have been unjustly excluded from employment in higher education throughout the history of this country and it is unreasonable and irresponsible to think that this exclusion and discrimination can be corrected without taking aggressive and affirmative action. Affirmative action or special minority admissions programs are essential for the reversal of discrimination and the achievement of an integrated and just society.

Justice Marshall in his moving dissent in the *Bakke* case catalogued the relationship between the history of unequal treatment afforded to Blacks and our present circumstances. Listen to what he writes:

> A Negro child today has a life expectancy which is shorter by more than five years than that of a white child. The Negro child's mother is over three times more likely to die of complications in childbirth. The infant mortality rate for Negroes is nearly twice that for whites. The median income of the Negro family is only 60% of that of the median of the white family. The percentages of Negroes who live in families with incomes below the poverty line is nearly four times greater than that of whites.
>
> When a Negro child reaches working age, he finds that America offers him significantly less than it offers his white counterpart. For Negro adults the unemployment rate is twice that of whites and the unemployment rate for Negro teenagers is nearly three times that of white teenagers. A Negro male who completes four years of college can expect a median annual income of merely $110 more than a white male who has only a high school diploma. Although Negroes represent 11.5% of the population, they are only 1.2% of the lawyers and judges, 2% of the physicians, 2.3% of the dentists, 1.1% of the engineers and 2.6% of college and university professors.[3]

One should think the Court would have taken judicial notice of the virulent and pervasive racism or societal discrimination which Justice Powell said had not been proved in the record or at least that the Davis Medical School did not have the capacity or authority to make such a finding. Perhaps I should here give the results of the University of Michigan Research Center on the findings regarding the economic status of Blacks to reinforce these points regarding the situation of Blacks in this country and to make it even clearer why I think that Justice Powell should have had no difficulty finding societal discrimination.

Despite a decade of government programs which have attempted to improve the economic status of Blacks, their median income is still only 60 percent of that of whites. Economists have estimated that ". . . even if Blacks had all the characteristics of white workers—the same average amount of education, the same representation in unions, the same percentage living in higher-wage urban areas, and so on—their wages would be about 20 percent lower than white's wages."[4] What this means to me is that there is an unadulterated 20 percent factor of racism which explains the difference between the wages of Blacks. The way social scientists have put it, if you control all the major factors affecting wages, there is a 20 percent deficit which flows alone from being Black.

There is illusion and myth that Blacks have never had it so good and that whites are losing ground and that inflation is cancelling out the real gains of everybody. But what are the facts? Between 1973 and 1978 real incomes have gone up, not down, even after one corrects for inflation, taxes and population growth. In that period, there have been no significant shifts of the distribution of economic resources either across sectors, that is government, business or labor, or among individuals (rich vs. poor, Black vs. white). Real per capita disposable income in 1978 is 8.4 percent above 1973 levels and these gains have favored upward income groups (those already doing well). Government tax collections as a whole have remained constant. If real incomes are rising and the distribution of economic resources has not changed, what is the source of the pain causing the decline in social responsibility and Proposition 13 type things? I suppose the explanation might be that real per capita income rose during the recession but only half as much as it did for the period prior to 1973. (Per capita disposable income rose 8.4 percent in the 17 quarters since 1973 but it rose 16.4% in the 17 quarters prior to 1973.)[5] The point I am trying to make is that things are not as bad as you might think. There is a kind of madness at large in this country that is not just an expression of what went on in Guyana but also here in California, probably the most affluent state in the country. We now have a new oppressed group, "disadvantaged affluent," what I have often referred to as the *nouveau malhereux*. They feel disadvantaged and disenchanted because of rising taxes, etc., although their standard of living continues to rise and they are very well off. They suffer from what David Riesman calls "middle-class hedonism." Well so much for the socio-economic context. I would like to say something about the complicity of academia in this changing mood and this situation.

It is melancholy fact to reflect upon that once the principles and procedures of affirmative action explicitly were made applicable to higher education, the most sustained, insidious and probably effective assault on affirmative action came from those closely associated with academia. The

Institute in a recent report it has published entitled *Affirmative Action for Blacks in Higher Education: A Report* indicates that it is not insensitive to the real problems and difficulties imposed upon those who even conscientiously and sympathetically try to abide by the procedural and substantive requirement of affirmative action. The problems and difficultues are small in comparison to the wrongs that have been committed and the social benefits to be received by those who have been excluded and denied so long. Although the immediate result of the *Bakke* case may be to leave things in a vague muddling state, no one can doubt the depth of the philosophical conflicts involved.

It appears that the Supreme Court is reflecting the mood of majority white Americans who believe that their interests are being displaced by affirmative efforts to insure equality and justice for Blacks and other oppressed groups. Unable to find solutions to the short term exaggerated problems facing the country, the negative reaction of many seems to have spread to the learned men and women we look to for counsel in the larger questions of justice. It may be easy to say that public or even judicial intervention cannot substantially affect educational outcomes. Those who say this believe educational attainment is almost entirely a product of individual inputs and personal merit. Educational outcomes nevertheless refer to any results or consequences of an educational institution and its programs. They may be the direct results of institutional activity and its programs. They may be the direct result of institutional activities such as academic degrees, technological discoveries, student knowledge and skills, or institutional staff salaries. Conversely they may be later consequences of those outcomes such as individual prestige, higher family income, more educated populace or effects on local community. Because measures of educational outcomes are often inexact and only superficially indicative of the outcomes under consideration, some prefer the term indicator in assessing the results of the educational system.

However the use of the term indicator and its suggestion of the inexactitude of measuring educational outcomes does not diminish the importance of affirmative action or public intervention to redress past and current injustices and inequities in our society. Moreover probably the most important social indicator in our society is being Black. Data on Blacks show that they suffer the double burden of poverty and racial discrimination in trying to realize the American Dream. Academia should understand this better than anyone. This fact makes universities like Howard University most important so that they can nuture centers like our Institute which can research these issues and make constructive determinations from the Black perspective. It also makes very important other predominantly Black higher education institutions with graduate schools. Perhaps I should here say a word about the Institute before I continue my defense of affirmative action in graduate and professional programs.

III. The Institute for the Study of Educational Policy (ISEP)

The Institute for the Study of Educational Policy is the outgrowth of an effort to establish a commission on the education of Black Americans. The commission was not established but in its place our Institute was established with some of the research agenda and program objectives that the commission would have had. The Institute has three program objectives.

The first is to issue an annual report on the status and situation of Blacks in higher education. ISEP has issued two such reports thus far. The first one is *Equal Educational Opportunity for Blacks in the United States: An Assessment* which was published in 1976. In September, 1978 ISEP issued its second report, *Equal Educational Opportunity: More Promise Than Progress*. Dr. Lorenzo Morris, a Senior Fellow on ISEP's staff, has completed draft of the third status report, which these remarks will draw on heavily when the situation of Blacks in graduate and professional education is discussed.[6] (By the way, it should be added that Dr. Michael Olivas, a Research Fellow on ISEP's staff, has also completed a research report entitled *Minorities in Two-Year Colleges*. That report and our third Status Report should be published next year.)[7]

Our second program objective is to monitor and evaluate the impact of law, social science and other research on the status and situation of Blacks in higher education. Growing out of this program objective has been a number of publications. One you no doubt have heard of, *The Changing Mood in America: Eroding Commitment* (1977), authored by Dr. Faustine Jones, who was a Senior Fellow at the Institute for three years. This study documents the conservative trend in this country. It reviews publications such as *Public Interest*, *Commentary*, many books, etc., to show that intellectuals have lost heart and are contributing in the movement toward retrogression. At the first meeting of our Advisory Board it was suggested that we should look at the changing mood in this country. The study just mentioned is a product of that suggestion.

The National Advisory Board also requested the staff to start our Affirmative Action Project. Our Affirmative Action Project has resulted in three publications. The first one is entitled *The Lengthening Shadow of Slavery: A Historical Justification for Affirmative Action for Blacks in Higher Education* (1976) by Dr. John Fleming, a Senior Fellow at ISEP. The second was *Affirmative Action for Blacks in Higher Education: A Report* (1978), which is based on a comprehensive review of affirmative action entitled *The Case for Affirmative Action* (1978) written by Dr. Fleming, Dr. David Swinton, and Mr. Gerald Gill, all on ISEP's staff. ISEP has also published *Advancing Equality of Opportunity: A Matter of Justice* edited by Dr. Cynthia Smith, a former Visiting Fellow on ISEP's staff, which was a report of a conference ISEP held designed to counteract the conservative mood of the country. These publications are mentioned to indicate that what I have to say is grounded very much in research which graduate schools are largely designed to promote. The Institute is a research center, it is a think tank, and all the senior staff does is engage in research and publish reports and analyses of public policy.

I said there was a faltering of concern for affirmative action and social justice. Today, in higher education we frequently speak of the issue I am dealing with here in terms of equity rather than equal educational opportunity. I suppose there is no area of post-secondary education that is fraught with more difficulties and problems than equity issues. This is because of the inevitable political, legal, judicial, and moral questions involved in the pursuit of equity or justice. It is more than a question of rhetoric or advocacy research. Researchers say that social science research questions have political implications. Surely equity issues are fundamentally and inescapably political and moral. It is not an accident in the pursuit of educational justice, for heretofore excluded groups to seek equity in addition to "equal opportunity." Those who have advocated bringing equity into higher education should understand that in a broad sense, it connotes fairness, justice, and right dealing. In a narrow and technical sense, it means doing moral and political good beyond traditional notions of positive law and justice. Equal opportunity means providing substantially the same experience for opportunity to all individuals similarly situated. Equity connotes that the peculiar characteristics or circumstances of a particular individual or group requires special, compensatory, preferential assistance. Academia feels that it is a meritocracy and that special, compensatory, preferential assistance is inconsistent with that meritocracy. Where has that meritocracy been for the past 300 years?

The Civil Rights struggle of the early sixties was transmogrified into a human rights and later universal rights struggle in the late 60's and early 70's. This meant that a movement initially concerned with providing justice to oppressed Blacks moved toward justice for women and to the aged and to birds, bees and trees. At regular intervals there came onto the scene another clamoring group, what I have called *nouveux malhereux*. It is an infinite progression, a proliferating assortment of individuals or groups which feel oppressed: Blacks, Chicanos, Indians, women, children, the gays, gypsies, lakes, streams, trees, grass, non-smokers, the handicapped and the children of the affluent. It is a roving *ad hoc faddism* moving on to nowhere and everywhere. The difficulty with doing good for everybody and everywhere is not that all the emergent claimants do not have legitimate grievances and needs. The difficulty is that given the limited materials and resources of society, prudentially it only should allocate its limited materials and resources to a well defined rank order of needs, interests, and groups. Clearly, some minority groups and interests are more grossly underrepresented than others in higher education, both as students and as staff members. Efforts must be made to correct this underrepresentation. Research must be undertaken to identify who is underrepresented, how much, why and what can be done to correct it. However, certain prudential judgements about the allocation of effort and resources are inescapable. To do this needs, interests and group problems must be identified and assessed. The assessment should lay the basis for ranking the needs, interests and group problems in terms of how well education can take care of needs, serves the interests, and solve the problems. I here would like to turn to an assessment of the status of Blacks in higher education.

IV. The Status of Blacks in Higher Education[8]

An assessment of equal educational opportunity for Blacks in America can be gained by comparing the access, distribution and persistence of Blacks and whites in institutions of higher education.[9]

Access to higher education is defined as the opportunity to enroll in college. Distribution refers to choice, in both the type of institutions students attend and the fields of study they enter. Persistence means completing the degree sought.

In 1976 the total population of Americans aged 18 through 24 was estimated at 28,163,000. Of this, the Black population was 3,535,000 or 12.5%. The percent of Black students among all higher education students in 1976 was 9.3.

In absolute numbers from 1964 to 1976 the access to college for Blacks increased. This was not only consistent with but also greater than increases in enrollment for the population as a whole. Approximate enrollment totals for Blacks were increased by 728,680 students from 306,000 in 1964 to 1,034,680 in 1976. White enrollment totals increased by 4,180,328 from 4,888,000 in 1964 to 9,068,328 in 1976. However, this is offset considerably when one considers the population as a whole. ". . . [B]y 1977 the number of college age Blacks '18-24 years old has increased at almost twice the rate of whites in that age group.' Including an increase in the older Black population 'the overall effect is that the Black population grew by 11% compared to 4.8% for whites'"[10] in the year prior to July 1977. Thus, total enrollment increases to an extent reflect general population increases. However, these increases do not reflect the career choices of the Black college age population. The aspirations of Black students are equal to or higher than those of their white counterparts, but their enrollment is consistently lower. In 1973, 77% of all Black high school seniors wanted to go to college, but only 35% enrolled. Of the white high school seniors, of the 72% who wanted to attend in 1973, 48% enrolled. Out of the 82% of Black seniors who wanted to go in 1974, 43% actually enrolled; comparable white figures were 82% and 55%.[11]

The distribution of Black enrollment demonstrates the growing dichotomy in higher education in which Black students attend the less costly public institutions. In 1976 of the 1,034,680 Black students in higher education, 832,866 were enrolled in public institutions of which 429,293 were in two year colleges. Much of the increase in public colleges was due to the rapid expansion of two-year colleges during the 1960s.

The high enrollment proportions in two-year colleges has been the subject of extensive debate. Attendance in such institutions is a high risk endeavor since the drop out rate is higher and those who graduate are the least likely to be recruited for better paying careers and graduate and professional schools. Thus by quantifiable indices minorities do not fare as well as do majority students.

Persistence, like distribution, has not improved as significantly as access. The completion of college of young Black adults lagged more than 14 years behind that of whites as of 1974. In that year approximately 8% of all Blacks completed at least four years of college. This was about 3% less than whites in 1960.

The barriers to Black participation at the undergraduate level became even more pronounced at graduate and professional study where Blacks are grossly underrepresented.

In 1976, Blacks received 6.4% of the B.A.s, 8.7% of the M.A.s, 4.7% of the law degrees, 5.2% of the medical degrees and 3.6% of the Ph.D.s. The high retention rate of Blacks at M.A. levels probably includes downward transfers for Black Ph.D. students. The low proportion at the Ph.D. level would also seem to indicate that Black students have the willingness and incentive to continue their education in greater proportions but confront barriers to their continuation and that the greatest barriers are to the Ph.D.[12]

Maldistribution of Blacks is a severe problem. This becomes obvious when one considers the participation of Blacks in the sciences. In 1976 Blacks comprised 3.8% of mathematical specialists, 1.4% of life scientists, 1.6% of physical scientists, 0.1% of environmental scientists, 1.7% of the social scientists and 0.7% of the engineers. In 1973, on the doctoral level Blacks were 0.7% of mathematics, 1.1% in biosciences, 0.7% of physical sciences, 1.1% of the social scientists and 0.3% of the engineers.[13]

Between 1972 and 1976 the proportion of Ph.D.s awarded to Black males has gone up less than 1%. In terms of growth this is an increase of almost 50%, hardly remarkable when considering absolute numbers, 427 to 636. "In the four years before 1974, it should be recalled the percentage of Ph.D. granting institutions went up equally fast."[14]

At the professional school level Blacks numbered 9,334 in 1974-1975. In two years this increased by 1,947. However, total enrollment in professional schools has gone up even faster.[15]

In meaningful terms, therefore, educational progress for Blacks in graduate school has been slow and is at the point of stagnation. In the professional schools it is regressing.

The major barrier from the perspective of the student at graduate level is insufficient financial resources. The largest source of overall funds for Blacks is private earnings, accrued savings and funds from parents. Given lower parental income (Black family median income has stuck at or below 60% of the median income of white families) and high youth unemployment (white teenage unemployment, 18%; minority teenage unemployment, 39.8% in 1976[16]) the availability of private funds which comprise the largest source for Blacks percentagewise is extremely limited.

Other sources of funding are assistantships, loans and federal aid. The low availability of research and teaching assistantships to Blacks is a severe educative as well as financial loss. Generally, students are selected for these positions on the basis of the individual faculty's preference and rarely is this based on a student's financial need. The racial barrier is a serious one, since the existing predominantly white male faculty are unlikely to choose a student with whom they must work closely for several months from amongst the minority population.

Consequently, Blacks rely heavily on federal support. "Since 1971 the proportion of federal funds for higher education going to graduate and professional school students has steadily declined from 22.9% in 1971 to 16.8% in 1976. Estimates for 1977 indicate a continued decline to 13.8%."[17] Within these reductions a substantial cut was made in teacher training and educational research. Approximately 60% of Black graduate degrees are in education. Thus, Blacks are likely to be the first to feel the effect of these cuts. This may be the main force behind the current and projected stagnation in degrees awarded.

At the professional level, additional barriers are claims of high attrition rates for Black students and claims that they do not serve the social purpose used to justify admission under special programs.

Although progress has been made in recent years in increasing the number of Blacks enrolled in law schools, from 2,128 in 1969-1970 to 5,503 in 1976-77, since 1971 the percentage increase has been only .2%.[18] In looking at first year U.S. medical school enrollment the situation is even bleaker. Although Black enrollment went from 266 in 1968-69 to 1,040 in 1976-77, this included percentage declines from 7.5% in 1974-75 to 6.8% in 1975-76 to 6.7% in 1976-77.[19]

The progress just beginning to be felt seems to be halting and the commitment to policies to increase equality of opportunity in America may be wavering.

The opinion for the majority in the *Bakke* decision argued against the special admissions program at Davis in that it was not shown that it would have any effect on improving the quality of health care available to Blacks and other disadvantaged groups. It was argued that there was no proof that Blacks admitted through special programs were more likely than others to serve underserved Black communities. Data indicate that Black medical students are by far the most willing of all students to work in "physical shortage" areas. Of Black medical students in 1974-75, 90.95% preferred to serve in cities and 27.2% within a hospital or academic health center.[20]

V. A Defense of Affirmative Action Programs

Affirmative action has made a difference. Recognizing professional need and responding to the call for racial justice, professional schools, particularly medical and law schools, have adopted a wide variety of programs designed to increase significantly their enrollment of minorities and women. The national commitment to affirmative action came from pressures to bring minorities and women into graduate and professional education and thereby increase their entrance into leadership and professional positions in American society.

The barriers to minority student access and success in higher education still exist. The use of standardized tests, the lack of required prerequisites due to inadequate career guidance and poor teacher attitude about ability, low academic self-confidence on the part of students, intimidating impressions of the rigors of scientific study, scarcity of visible success models, institutional restraints and financial need all continue to retard progress.[21] Affirmative action must continue as an important national goal to overcome these barriers and unleash a wealth of intellectual talent and skills for the benefit of all persons.

Whatever one may say about the special admissions program at the Davis Medical School of the University of California, it unquestionably was designed to bring more minorities into the medical profession, including Blacks. An assault on the special minority admissions program at Davis was inevitably and inescapably an assault upon bringing more minority groups into medical schools and thus higher education. Although some may have been sincerely motivated by the notion of racial neutrality in supporting *Bakke* in his case, an unavoidable outcome of such an assault was to undermine the legitimacy and, in some minds, the desirability of making special efforts to educate Blacks and other minority groups. One cannot now fully foresee the consequences of the *Bakke* decision, although it can immediately be seen that it was partially reassuring for Justice Powell in announcing the judgement of the Court to state that race may be taken into account in the admissions process. However, it was disappointing for Justice Powell to write that the special minority admissions program could not be justified upon the basis of "remedying . . . the effects of 'societal discrimination,'" a concept of injury he found "amorphous" and that might "be ageless in its reach into the past."[22] This reference to Justice Powell and the *Bakke* decision leads to an explicit and forthright discussion of a defense for affirmative action in graduate and professional schools.

Before stating more fully a defense of affirmative action, I must first say a few words about the *Bakke* case, although I know you are going to devote a session to it tomorrow morning.

As you know, on June 28, 1978, the United States Supreme Court by a vote of five to four decided that the University of California at Davis Medical School's special admissions program was unlawful. Note well that I did not say unconstitutional. Four Justices, Burger, Stewart, Rehnquist and Stevens, thought the program violated Title VI of the Civil Rights Act and did not reach the question whether the program violated the Equal Protection Clause of the Fourteenth Amendment. Justice Powell, who wrote the opinion for the Court thought the program violated the Equal Protection Clause but said the Supreme Court of California erred in saying race could not be taken into account in the admissions process. Four Justices, Brennan, Blackmun, White and Marshall, thought the program did not violate the Equal Protection Clause and that race could be taken into account in the admissions process.

So much has been written and said about Justice Powell's opinion, the main substantive arguments of which no other Justice indicated agreement, that I will say little more about it. Justice Powell regarded the use of race or ethnic background in the admissions process as suspect and rejected three of the four purposes the program purported to serve. The three rejected purposes were reducing the historic underrepresentation of minorities in medical schools and the professions, remedying the effects of societal discrimination, and increasing the number of physicians who practice in underserved communities. The fourth purpose he accepted, namely, "obtaining the educational benefits that flow from an ethnically diverse student body." However, he rejected the Davis method of considering race because although "'the race of an applicant may tip the balance,'" the "factor of race" in contributing "to diversity" may not be "decisive."[23] The Justice *speaks with forked tongue.*

However, Justice Brennan in his concurring and dissenting opinion in which three other Justices joined maintained:

> Government may take race into account when it acts not to demean or insult any racial group, but to remedy disadvantages cast on minorities by past racial prejudice, at least when appropriate findings have been made by judicial, legislative, or administrative bodies with competence to act in this area.[24]

He thought the legacy of slavery and the turning of the Equal Protection Clause "against those whom it was intended to set free" in the separate-but-equal doctrine justified taking race into account in the admissions process. In rejecting the argument that Title VI of the 1964 Civil Rights Act required color blindness, he wrote:

> It is inconceivable that Congress intended to encourage voluntary efforts to eliminate the evil of racial discrimination while at the same time forbidding the voluntary use of race-conscious remedies to cure acknowledged or obvious statutory violations.[25]

Thus, since the racial classification in the Davis program served "an important and articulated purpose," did not stigmatize or single out any group "least well represented in the political process to bear the brunt of a benign program,"[26] and sought to remedy the effects of societal discrimination which resulted in a substantial and chronic underrepresentation of minorities in medical schools, access to which was impeded by the handicaps of past discrimination, it was constitutional. After reviewing prior relevant cases of the Court, Justice Brennan concluded:

> Properly construed, therefore, our prior cases unequivocally show that a state government may adopt race-conscious programs if the purpose of such programs is to remove the disparate racial impact its actions might otherwise have and if there is reason to believe that the disparate impact is itself the product of past discrimination, whether its own or that of society at large. There is no question that Davis' program is valid under this test.[27]

I have quoted at length from Justice Brennan's opinion because I think undue attention has been given to Justice Powell's opinion.

A defense of affirmative action in the context of *Bakke* should also give some attention to Justices Blackmun's and Marshall's opinions. There are three very noteworthy statements of Justice Blackmun I should like to bring to your attention. Eschewing the "profound hypocrisy with which the country—and now the Supreme Court—has addressed . . . affirmative action,"[28] Justice Blackmun observed:

> Wholly apart from racial and ethnic considerations . . . the selection process inevitably results in the denial of admission to many *qualified* persons, indeed, to far more than the number of those who are granted admission. Obviously, it is a denial to the deserving.[29]

Implicit in this important quotation is the recognition that in a decision-making arena where there are competing contestants, the values and goals of the game or enterprise going on in the arena will determine who will win or lose. A few more words about values and goals later. Later on he writes:

> It is somewhat ironic to have us so deeply disturbed over a program where race is an element of consciousness, and yet to be aware of the

> fact, as we are, that institutions of higher learning, albeit more on the undergraduate than the graduate level, have given conceded preference up to a point to those possessed of athletic skills, to the children of alumni, to the affluent who may bestow their largess on the institutions, and to those having connections with celebrities, the famous, and the powerful.[30]

And finally, with almost an existentialist's appreciation for starkly subtle paradox, he concludes:

> I suspect that it would be impossible to arrange an affirmative action program in a racially neutral way and have it successful. To ask that this be so is to demand the impossible. In order to get beyond racism, we must first take account of race. There is no other way. And in order to treat some persons equally, we must treat them differently. We cannot—we dare not—let the Equal Protection Clause perpetrate racial supremacy.[31]

I am not going to quote from Justice Marshall. The reason I have trespassed on your time and quoted or referred to at length the opinions of Justices Brennan and Blackmun is because some people have accused me of being rather strident in defending affirmative action. I believe that the language of Justice Brennan—and if I had quoted the language of Marshall and more of Blackmun—is pretty strong language also.

I will conclude with two observations: one constitutional and the other intellectual or you might say academic. The intellectual enterprise, the learning enterprise, cannot move forward, I believe, without a diverse perspective. To this extent, I agree with part of Powell's analysis about diversity being an academic value. It certainly is and one should pursue affirmative action for the sake of diversity. Black faculty and students enrich the learning enterprise, thus not just benefiting the minority students or women but the enterprise as a whole. The Institute in one of its recommendations, our third recommendation, says that any institution subject to Executive Order 11246 should be required to develop affirmative action programs for undergraduate and professional students so as to make rich and complete the learning enterprise.[32]

Finally, on the constitutional level: One of the reasons I was so disappointed with the *Bakke* decision was that I thought it afforded an opportunity for the Supreme Court to return to the original understanding or meaning of the Reconstruction Amendments. You will recall that Justice Miller in the *Slaughterhouse Cases* (1873) said in the first opinion of the United States Supreme Court interpreting the Civil War Amendments that he doubted that ever in the history of the United States that the Equal Protection Clause would be used except for the benefit of the recently freed slaves for whom it was obviously adopted. He said the pervading purpose of the Thirteenth, Fourteenth, and Fifteenth Amendments was to provide liberty and security to the Freedmen and to protect them from their former oppressors. The Constitution is not color blind. Justice Marshall in his opinion at the end (I said I was not going to read it but I must tell you what he said) said that he feared the Court had come full circle. The Supreme Court in the *Slaughterhouse Cases* and in the *Civil Rights* cases and in a number of other cases, frustrated the thrust and the affirmative action purpose, you might say, of the Reconstruction Civil Rights Acts. I was disappointed that the Court did not return those provisions to their original meaning. This does not mean, let me hasten to add, that other minority groups similarly oppressed and situated like Blacks could not invoke the Equal Protection Clause and some of the Civil Rights Amendments.

Finally, I briefly alluded to the values of the game. This is what I really want to elaborate on and I can not do it because of time constraints. Nevertheless, I put it to you, to the extent one has difficulty with affirmative action programs, special minority admissions programs and affirmative action in employment, you will pardon my saying it, I have the gnawing feeling that those individuals are racists and do not think Blacks are fully human. I hope I am wrong! However, I do believe there is a reservoir of decency in our society and that if the facts are made clear, and if everyone is given a chance, they will do right, or at least try to do right. At least I hope so. But the racism is there and the question is can we rise above it.

Thank you for the opportunity to come here and speak. The future turns, I think, on graduate schools and I am very disappointed that the government is not funding graduate schools as much as they have in the past. I think research is as important as it has ever been and graduate school is the best place to nourish it. Unlike Daniel Bell I come out just the opposite in reference to our technical post-industrial society. I do not see our post-industrial society as a basis for arguing against affirmative action. Quite the contrary. If we are going to be ruled by experts in the future, I think it is essential that a representative number of them be minority groups and female. Thank you.

REFERENCES

1. For a preliminary statement of part of the product of this research see Kenneth S. Tollett, "The Legalization of Social Ordering" in *Validation of New Forms of Social Organization*, ed. Gray L. Dorsey and Samuel I. Shuman (Weisbaden: Frantz Steiner Verlag, GMBH, 1968).
2. Although I had a prepared text for this presentation, I have deviated from it frequently. What follows is an amended, extended, and edited version of it.

3. *Regents of the University of California v. Bakke*, 98 S. Ct. 2733, 2802, (1978).
4. Saul Hoffman, "Black/White Income Differences, 1967-1974," *Economic Outlook USA*, 4, No. 2 (Spring 1977), p. 28.
5. Lester C. Thurow, "The Real Sources of Economic Pain," *The Wall Street Journal*, 6 July 1978, p. 12.
6. Lorenzo Morris, *Elusive Equality: Status of Blacks in U.S. Higher Education*, Manuscript, publication forthcoming.
7. Michael Olivas, *Minorities in Two-Year Colleges*, Manuscript, publication forthcoming.
8. The assessment that follows is based on Institute Annual Status Reports, primarily our Third Status Report—*Elusive Equality: Status of Blacks in U.S. Higher Education* by Dr. Morris. It will be about a 500 page volume with 200 pages of tables, figures and statistics.
9. I should point out that this is the format of our Status Reports. Our first Status Report dealt with the access, distribution and persistence of Blacks in higher education. It also had a chapter in it on the economic return of Blacks from education. The second report was briefer and did not deal as extensively with the economic return in education as the first one. The third report returns to that theme.
10. Morris, Chapter 3, "Access of Blacks and Others to Higher Education in America," p. 9.
11. Institute for the Study of Educational Policy, *More Promise Than Progress* (Washington, D.C.: Howard University Press, 1978), Figure 2-2, p. 45. Whites seem better able to realize their high level aspirations, although their aspirations are not as high as or certainly not any higher than the aspirations of Black students.
12. Morris, Chapter 3 and Chapter 7, "Graduate and Professional Education: Special Problems of Access, Distribution and Persistence."
13. Bureau of the Census, *Current Population Reports*, "Selected Characteristics of Persons in Fields of Science and Engineering: 1976," Table 2; and, *Minority Group Participation in Graduate Education, A Report with Recommendations of the National Board on Graduate Education*, No. 5 (Washington, D.C.: National Academy of Sciences, 1976) Table 1, p. 32-33, respectively.
14. Morris, Chapter 7, p. 33. I want to mention that when I was flying out here I was looking at some tables. One thing that struck me in one of the tables was that from 1973 to 1976 affirmative action had increased the participation of women in graduate education. Black women in relation to Black men improved their Ph.D. receiving at a much higher rate than white women in relation to white men. I should hasten to add that the report we issued in September indicated that the attrition rate of Black women in higher education was much

higher than Black men. Our staff tried to figure out why that was the case and we came up with some hypotheses but we have never been able to really determine it.

15. Morris, Chapter 7.
16. U.S. Commission on Civil Rights, Clearinghouse Publication 55, *Toward Equal Educational Opportunity: Affirmative Admissions Programs at Law and Medical Schools* (June, 1978), p. 30.
17. Morris, Chapter 7, p. 26.
18. Morris, Chapter 7, Table 7-30.
19. *Selective Admissions in Higher Education, Comment and Recommendations and Two Reports* (Calif: Jossey-Bass Publishers, 1977), Appendix D-2.
20. Morris, Table 7-23 contains supporting information.
21. *Minority Group Participation in Graduate Education*, Chapter 1 and Chapter 3.
22. *Bakke*, p. 2757
23. *Ibid.*, p. 2757, 2762.
24. *Ibid.*, p. 2766.
25. *Ibid.*, p. 2772.
26. *Ibid.*, p. 2785.
27. *Ibid.*, p. 2789.
28. William Greider, "After Bakke Blacks Need Funds, Not Good Intentions," *Washington Post*, 2 July 1978, Sec. B. p. 1.
29. *Bakke*, p. 2806.
30. *Ibid.*, p. 2807.
31. *Ibid.*, p. 2808.
32. Institute for the Study of Educational Policy, *Affirmative Action for Blacks In Higher Education: A Report* (Washington, D.C.: Institute for the Study of Educational Policy, 1978), p. 6.

Geraldine R. Waters

I think in consideration of the topic which has been so brilliantly illuminated by Dr. Tollett, one might pose the question, "How defensible is affirmative action in graduate and professional programs in a 'post Bakke decision' era?" I think any defense of affirmative action in graduate professional programs would almost mandatorily have to grow out of the climate of change created by the *Bakke* decision.

Minority admissions, used here interchangeably with affirmative action, is inextricably linked to the dynamics of the *Bakke* decision. Among our institutions of higher education there are probably two prevailing attitudes which have emerged. On the one hand, we have institutions which probably feel they now have the authority to continue, under certain conditions, their affirmative action programs. On the other hand, there are those institutions which feel they now have license to abandon affirmative action programs completely.

The fact still remains that setting of minimum standards for admission will always separate certain groups from being admitted to programs. My question is, can society afford not to consciously consider race as an admissions criterion, especially in the face of reality of so few minority students entering into the highly respected professional fields. If for no other reason, is there not a moral obligation that should dictate that some mechanism for allowing minority students enter the professions be devised?

Perhaps we need to call upon a cadre of sociologists, anthropologists and psychologists or any combination of sages to come up with an equitable formula for determining how many years of "educational evolution" it would take to completely eradicate the differences evidenced in minority students as a result of earlier educational deprivation in order to render them equally qualified to enter institutions of higher education in pursuit of an esteemed profession. Once identified, the formula, with its multiplicity of longitudinal dimensions should be superimposed on all of the offshoots of the *Bakke* decision, and should be woven into the subtle fabric of admissions policies which are becoming more and more exclusive at an alarmingly rapid rate. The system should, in essence, be paying minority students—"educational opportunity dividends" which have been held in escrow until such time as societal conditions mandated their release.

What better time than now, when we are moving rapidly back into a sophisticated system of minority exclusion from higher education *vis-a-vis* standardized tests and mandated predictive indicators which are being built into admissions criteria?

I submit that there is an answer to affirmative action as it relates to minority admissions, but it will call into play the deepest sense of commitment on the part of every faction of society. This commitment must be framed in statutes as legalistically binding as the constitutional amendments, the statement of which must be void of any hint that it is a design to help those of inferior intellects. It should and must be perceived as an attempt to unleash bottled up intellectual energy which has, because of the law of disuse and prohibition, been allowed to atrophy. What minority students need, by way of affirmative action, is a period for regeneration of dormant intellectual potential. It is common knowledge that the kind of regeneration being alluded to is only possible by exposure to what is considered as the quality education.

The principles of the *Bakke* decision derive their significance only to the extent that they provide a focus for making determinations about how to proceed in the process of protecting one's civil rights, and how to impose guarantees that the same level of specificity will be used in safeguarding minority admissions rights as vigorously as were applied in reaching the controversial decision.

Race is and should continue to be a factor under consideration for admission of minority students until such time as we are able to have equal access to education, equal access to resources and opportunities by virtue of recognized and measured abilities. I feel that it is extremely dangerous for educators to become overly intimidated by the legal entanglements embodied in the legal explanations of the *Bakke* case. The facts are relatively clear, that in the case of *Bakke*, society has been caught on a technicality of a system created to rectify earlier educational opportunity imbalances. Bakke, and perhaps justifiably so, noted an encroachment on his rights, and in the process, brought national attention to the fact that his race, as a nonminority citizen, was being used to exclude him from medical school. This maneuver was done in an attempt to retain slots for minority students, who by the established standards, fell below his range of scores. Bakke, though by definition, was not to be classed as having come from the disadvantaged group, sought consideration through the special admission route and was denied.

My position is not one in opposition to the decision; my position is a heartrending plea to society to raise the levels of consciousness of all segments of society, most particularly those segments entrusted with the controls of higher education in order to have them view each and every ramification of this case to safeguard the educational and human rights of all.

Are there any realistic alternatives at this late stage in our educational evolution which might have an equalizing effect on minority students' chances for succeeding, given the advantages of continued affirmative action programs? Perhaps, the practice of a particular school which was described as providing summer coursework for students to bridge gaps created by their experiential and learning deficits to permit them to be admitted to graduate professional programs during subsequent semesters, has more appeal than some of the other approaches described in some of my prior readings. Basically, what we are dealing with is the need for a mechanism for closing the intellectual gap to render minority and nonminority students equal in degrees of potential for succeeding in the professions.

A variable which has come into play which impacts upon minority admissions is the evaporation of federal funding for support of minority education. While it might have accelerated as a movement since the *Bakke* decision, it can be shown that the movement was well underway even before. The conservative posture in federal spending is a manifestation brought about in an inflationary period when the veneer of liberalism peels off to reveal the conservative undergirdings of society. The result is the clamping shut of the coffers which once overflowed with dollars to educate the "disadvantaged". The *Bakke* decision is but a convenient conveyor of the prevailing political mood. To put it more succinctly, the climate of change theoretically brought about as a result of the *Bakke* decision has been in existence long before the decision itself came down.

I submit that there is a need for change. There is a need to consciously defend affirmative action in defense of minority admissions. We cannot speak of subjecting subgroups to identical criteria when nothing else has been identical from birth till now. The alternatives are clearly before us, we have but to set them into motion. We have to start now designing affirmative action programs, which will guarantee for minority students equal access to educational optortunities.

We must master-mind more reports of the ilk described by Dr. Tollett designed to scrutinize educational policy to determine the extent to which they influence decisions made about minority students.

We need to conscientiously set up the machinery for summer tutorial programs and communications development seminars to better prepare minority students for the rigors of entering and being retained in professional schools.

Dr. Tollett, may I publicly thank you and your committee for taking the "bull by the horns" with the work of your affirmative action projects. Your status reports should provide a comprehensive guide to all who are sincere about wanting to make a difference. You have left us with a charge to reexamine our commitment as educators to the preservation of the rights of minority students to complete access to higher education.

REPORT OF THE COUNCIL OF GRADUATE SCHOOLS COMMITTEE ON MINORITY GRADUATE EDUCATION

Albert C. Yates, *University of Cincinnatti*
Beverly Cassara, *University of the District of Columbia*
Oscar A. Rogers, Jr., *Jackson State University*

Albert C. Yates

As you know, the Council of Graduate Schools has, for several years, sponsored a Task Force on Disadvantaged Graduate Students. Presumably, the committee has existed because you, as the Council of Graduate Schools membership, have felt that priority and attention should be given to the concerns of students, or potential students, which may be described as "disadvantaged."

The session planned earlier, but cancelled, resulted from the initiative of the Task Force, and of CGS's Program Committee, and was intended as a vehicle for exchanging information and ideas between the committee and the membership it seeks to represent. Our hope had been to gain the reactions of the membership to the plans, activities, and impressions of the committee. We think it important that you be involved in the early planning and thinking as we begin to address the general issues of minority group participation in graduate education.

Before going further, I should introduce other members of the committee:

Dean Beverly Cassara; University of the District of Columbia
Dr. Frank W. Hale, Jr.; Ohio State University
Dean Oscar A. Rogers, Jr.; Jackson State University
Dean Bernard Spolsky; University of New Mexico
Dean Albert H. Yee; California State University

I feel compelled to comment on Dean White's administrative effectiveness—actually, a compliment. Some six-to-eight months ago, following a meeting here in San Diego, Don asked if I would *consider* assuming the chairmanship of CGS's Task Force on Disadvantaged Graduate Students. And, of course I indicated that I would *consider* it. Several days later, after returning to Cincinnati, I received a note of thanks from Don for agreeing to chair the Task Force. Actually, I relate this to you for another reason as well; I think it important to share with you the reasons for my initial hesitancy; and there were two: I had a concern that the Task Force, structured and defined as it was then, and independent of the merits of the occupant of the chair, could ever hope to accomplish anything at all. A second concern was with my competence to chair such a group. Though being a member of a minority group might suggest a certain level of empathy, it does not certify instant expertise in minority affairs. Subsequent conversations with many of you here, and others elsewhere, reveal, to my mind, that there is no one with ready answers and tested solutions. Though little comfort is found in such a revelation, my concern about competence was lessened. Though I have approached it somewhat circuitously, the point to emphasize and assert is that CGS, through actions by its members, is strategically positioned to contribute substantially to increased minority group participation in graduate education; that such will become a reality will require the collective wisdom and efforts of us all.

I turn now to a brief summary of the activities of the committee. The committee met in mid-September, for a full day, at the CGS offices in Washington. A report of that meeting has been filed with the Executive Committee.

After considerable discussion of the history, role, function, charge, and general responsibilities of the Task Force, it became clear that the committee lacked a focus for its efforts. To proceed further required an assumption, which might be stated as follows:

> The leadership *and* membership of the Council of Graduate Schools is concerned that large numbers of minority students, for social, economic, or historic reasons, may be excluded from participating in graduate education. Thus, CGS supports and encourages efforts which lead to increased representation of qualified minority students in member-institutions.

If such an assumption can be made, the charge to the committee follows immediately, which, stated succinctly is to assist member-institutions in identifying and removing barriers which impede the participation and progress of minority students in graduate education. More elaborately, the committee is in agreement that the elements of its charge should include the following objectives:

1. To monitor and to analyze, on a periodic basis, the general atmosphere of graduate education for under-represented groups,
2. To communicate and interact with the CGS membership and other pertinent groups in regard to current issues related to under-represented groups in graduate education,
3. To synthesize, and advise the CGS leadership on, the climate of graduate education for under-represented groups, and
4. To seek ways of assisting member institutions in creating the kind of positive environments that will contribute to the academic success

of minority students and, it is hoped, to their ultimate success in subsequent careers.

Much of the later discussions of the committee centered about specific issues pertinent to the graduate education of under-represented groups. Five general areas were identified as the focus of concerns: 1) recruitment, 2) admission, 3) retention, 4) institutional atmosphere, and 5) placement.

In respect to these areas of concern, how can the committee best assist member institutions? After much discussion, the idea of a national conference emerged. The concept is still but an idea, the structure and emphasis of which can take a variety of focuses. The goal of the conference would be consistent with the elements of the charge to the committee in analyzing, advising on, and communicating the concerns of under-represented groups in graduate education. The construction of format, content, and general theme of the conference would consider and include at least the following:

1. As background and in suggesting an overall focus for the conference agenda, the NBGE recommendations should be reviewed.
2. While some attention should be given to philosophical issues in minority graduate education, the bulk of the conference should be devoted to a delineation of practical experiences and problem solving measures.
3. The principal vehicle for communication should be the conference proceedings, in the form of a monograph, as edited by this committee.

Under the rubric of general concerns of, and actions by, the Task Force, two additional items surfaced: one resulting in a recommendation by the committee and the second in the form of a suggestion. Firstly, it was agreed that a recommendation would be forwarded to the Executive Committee calling for the initiation of a marketing study, the intent of which would be to ascertain the usefulness of a compendium of minority graduates of graduate programs. It is the intuitive assertion that such a compendium would be of benefit not only to minority students but also to educational institutions, industry, government, and virtually all consumers of highly-trained personnel. Secondly, it was observed that many institutions are committed to the development of "minority awareness programs," but lack the expertise and financial wherewithal to make significant strides. For this reason, it is the suggestion of the committee that the CGS be asked to pursue and develop funds which would offset the expenses of consultative services for such institutions.

I deeply regret that time does not permit discussion of the impressions and recommendations of the Committee on Minority Graduate Education. Still, any written responses would be greatly appreciated.

OBSERVATIONS ABOUT PLACEMENT OF MINORITY STUDENTS

Beverly Cassara

Placement must be seen as part and parcel of the whole minority student program and cannot be separated from it since it relates to:

1. Recruitment—minority students are apt to go where minority students have succeeded.
2. Counseling—helping minority students find their way into programs with strong career possibilities will to a great extent determine success in placement. For instance there is a great need for minorities in the engineering field.
3. Financial aid—the only way many minorities will find their way into those relevant programs will be through financial aid.

This brings us full circle back to placing minorities on the job which in turn will serve as a recruiting tool.

When we speak of placement in academe we know that there is still some good opportunity for minority students in most fields. Nevertheless, there are still problems, for the climate on the white campus is still often difficult for the minority professor, and this can be a basic placement problem. See the *Chronicle for Higher Education* October 2, 1978.

We must not take too much comfort from the fact that some minority students who do graduate have better opportunities for placement right now. Trends are important but numbers are important too, and numbers show that we need to get many more minority students into the educational pipeline to ensure equal opportunity. One way to encourage minority students is to make the success for their immediate forerunners visible to them. At The Ohio State University, Dr. Frank Hale is responsible for publishing a brochure entitled "They Came and They Conquered" of which a new edition will be available in January 1979. This brochure tells the story of 300 minority alumni (with pictures) spelling out their academic and professional success.

Another service which is handled out of Dr. Hale's office is a compilation of graduating minority students from all departments in the university. This list is circulated wherever it can be helpful for employment purposes for the students. It lists students by field and specialty, name, address and telephone number. Students receive on the average of 10–12 inquiries each as a result, and two to three job offers. It has been suggested that the Committee on Graduate Education for Minority Students of the Council of Graduate Schools develop and provide a service like this on a national basis.

Dr. Hale says that more than this is needed for effective placement services in a university. He suggested that even after completing graduate studies in a large university, minority students believe that they will still be stereotyped or for other reasons feel that they may not be served well by the regular placement office. Therefore there should be a central placement office for minority students.

Sometime, minority students receive placement offers too early and therefore do not finish their courses of study. This is more evident in certain fields and certain geographical areas than in others. However, Dr. Oscar Rogers of Jackson State suggests that graduate programs can help such persons finish their degree programs by establishing part-time opportunities which will allow students to pursue adequate employment opportunities and finish their graduate programs in a timely way.

There are two academic areas which are encountering difficult placement problems. These are languages and history where even the market for minorities is highly saturated. Good counseling can help these students prepare long before graduation for placement outside of academe. It is certainly not desirable to discourage students who desire these subjects to stay completely out of their fields.

One last observation relates to the need for a national study that shows exactly where the minority students are, how and when they finish or do not finish and the degree of their placement success.

Fifth Plenary Session

Thursday, November 30, 1978, 3:30 p.m.–5:00 p.m.

BUSINESS MEETING

Chairman: Donald J. White, *Boston College*

CHAIRMAN'S ADDRESS

ACHIEVING PROGRESS IN GRADUATE EDUCATION

Donald J. White

"In ten thousand years, men may go to the moon," the lecturer said. His topic was cosmology; the audience, a Harvard philosophy class. The lecturer was competent: he was (Alfred North) Whitehead. True, his estimate erred a bit on the conservative side. Less than thirty-five years after that class meeting, (which was in the fall of 1934), two American astronauts walked on the moon.[1]

Whitehead, for all his brilliance, did not have the gift of prophecy. He had plenty of company for, as Dr. Simon Kuznets, Nobel Laureate in Economics from Harvard University, pointed out on the occasion of the fiftieth anniversary of the National Bureau of Economic Research, American social scientists—and economists in particular—have a dismal record of anticipating key oncoming developments.

No matter. Probably until this decade, our society enjoyed so much margin for error that there was little difficulty in riding out the squalls. And, more than once, the sheer strategy of "throwing enough money at the problem" won the day.

In my opinion at least, those days are over. It is not a time to weep. But it is a time to reflect.

The seventies are a watershed. *Daedalus*, in its recent twentieth anniversary issue, has marked the passing of a generation since its founding by asking whether anything really significant—say on a par with the arrival of nuclear power—has happened in the generation that began in 1958. The test is that of truly lasting influence, the detecting of a truly "universal event."[2]

174

I would submit that, in the last part of that generation—in the seventies, and perhaps with roots that stem at least from the sixties—three critical developments have transpired:

First, the revolution of rising expectations, world wide and anchored in concepts of equity which mandate a response.

Second, the growing "one worldedness" of our planet—far beyond anything the late Wendell Willkie had in mind when he published *One World* during World War II. This development is full of promise, but the breadth of understanding that it requires as the price of fulfillment exceeds anything we have heretofore contemplated. Not the least is understanding the role of competition in the world arena.

Third, there is the commodity shortage crisis—best illustrated by the energy situation. We were taking too much for granted. Even on such a mundane matter as food, we had watched with pleasure the shrinkage of food costs from twenty-five percent of the family budget to about seventeen percent in less than a generation and now we do not like it one bit that the percentage is on its way back to twenty-five percent! (As an aside, it might be noted that Dean Keenan of Harvard has wondered aloud what graduate education may be like in a world of $25 a barrel for oil, a situation that may not be long in coming.)

In any event, thus far in coming to grips with such powerful engines of change as I have described, I believe we have only demonstrated the sad state of disrepair of our socio-economic adjustment mechanisms. The present inflation malaise is only symptomatic of needed basic structural changes both in our society and around the globe.

All of this foreshadows a need for careful research and problem solving, not doomsaying. I am not of the Heilbroner school.[3]

But I do believe that H. G. Wells was right when he said: "Human history becomes more and more a race between education and catastrophe." So, now, perhaps the cat is out of the bag—for you may have been wondering what all of this has to do with graduate education.

For the most part, let me leave that to you to decide. But I want to make a special plea—and it is exactly that—a special plea for the pursuit of understanding. "With all of thy getting, get understanding", saith the Good Book. The understanding for which I plead is that all of us as educators and graduate deans try to see how vital is cooperation among all of us for the success of our truly common enterprise. When President Jerome Wiesner of M.I.T. cries aloud for more attention to basic research, he is speaking not alone for M.I.T. and the scientific community but also for all of us who have a stake in the genuine advancement of knowledge and control over our lives and our environment.[4] When Chancellor William McElroy of the University of California, San Diego, in his keynote address at this Annual Meeting, asks for the creation of more academic subsets, he speaks directly to some of us, but he speaks for all of us. When President Michael Pelczar of our Council of Graduate Schools urges that we think comprehensively about the function, role and scope of graduate education, he reflects my view and I hope yours as well.

It is a great time to be alive. The times may be parlous but never has there been more opportunity for education to influence positively the course of history and the welfare of all mankind.

So, as I said in addressing you last year at the beginning of my term as Chairman, let me close by saying: "Make no little plans; they have no magic to stir men's blood—make big plans; aim high in hope and work."[5]

REFERENCES

1. The excerpt, with parenthetical phrases added, is from Joseph Gerard Brennan, "Alfred North Whitehead—Plato's Lost Dialogue", *The American Scholar,* Autumn, 1978, page 515.
2. See particularly Annie Kriegel, "Generational Difference: the History of an Idea", *Daedalus,* Fall, 1978, pp. 23-39.
3. Robert L. Heilbroner, *An Inquiry into the Human Prospect,* New York: W. W. Norton & Company, Inc., 1975.
4. See "U.S. Commitment to Scientific Research Deteriorating Rapidly, M.I.T. President Warns", *The Chronicle of Higher Education,* Vol. XVII, No. 11, November 13, 1978, pp. 1, 15-18.
5. The exact origin of this remark is obscure. See M. T. Copeland, *And Mark An Era,* Boston: Little, Brown & Company, 1958, page 146.

PRESIDENT'S REPORT

Michael J. Pelczar, Jr.

Some of the subject material which normally constitutes the President's report at our annual business meeting was included in my remarks at the luncheon meeting yesterday. There are, however, several additional matters of business which I wish to share with you now. I will present these in outline form; more detailed information is (or will be) available from various documents.

I. The CGS-GREB 1978-1979 Annual Graduate Enrollment Survey, Part I.

Results of Part I of the 7th annual CGS-GREB Graduate Student Enrollment Survey have just been made available Two of the distinctive and attractive features of this survey are:

1. *Early Response*. Results of this survey are available during the first semester of the academic year.
2. *High Response Rate*. Data from 83% of the institutions surveyed were available for this report. Additional institutions have submitted their completed questionnaires, bringing the response rate up to 93%.

Some of the highlights of this survey can be summarized as follows:

1. Overall enrollment: Down very slightly (less than 0.4%).
2. First time enrollment: Down 2.4%.
3. Applications: Down 1.6%.
4. Assistantships: Overall 1.9% increase; slight decrease in public Ph.D. type institutions.
5. Fellowships: Slight increase (+0.8%) in public institutions; Decrease (−4.3%) in private institutions.
6. Part-time/full-time enrollment: More full-time enrollments at Ph.D. type institutions; more part-time enrollments at Master's degree type institutions.
7. Degrees awarded: Master's degrees down by 2.8%; doctoral degrees down by 4.0%.

These statistics on graduate education suggest an over-all condition of stabilization to perhaps a slight retrenchment.

Dr. Bernard Khoury, Program Director, GRE, Educational Testing Service, has delivered copies of this report to this meeting. They will be available on the table at the back of this room at the end of the business meeting. Additionally, copies will be mailed to each of our graduate deans after this meeting.*

---

*Editors Note: The complete survey may be found in the Appendix on page 273.

177

II. Conference on the Assessment of Quality of Master's Degree Programs.

The Council of Graduate Schools, together with the Commission on Higher Education of the Middle States Association of Colleges and Schools, and University College of the University of Maryland will co-sponsor a conference on *Assessment of Quality of Master's Degree Programs*. This conference will be held March 1-3, 1979, at the Center for Adult Education, University College, University of Maryland, College Park, Maryland. More detailed announcements of the program will be available in the near future. The major topics proposed for this conference include:

The value and future of master's degree programs.
The design of master's degree programs.
The meaning of academic quality.
The standards of quality.
Assessment of master's degree programs.

The Council of Graduate Schools has a committee working on this topic, i.e. Assessment of Quality of Master's Degree Programs. Some members of this CGS Committee will be key participants in the Conference.

III. New Members of CGS: Institutions Admitted to the Council of Graduate Schools in the United States During 1978

Eleven institutions were admitted to membership during 1978. They are as follows:

California State College, Bakersfield
Gannon College
Louisiana State University Medical Center
McNeese State University
North Carolina A & T State University
St. Bonaventure University
South Dakota School of Mines & Technology
Trenton State College
University of Baltimore
University of Texas at El Paso
Wayne State College, Nebraska

The total membership for 1978 numbered 367 institutions.

IV. Consultation Service

The consultation services available from CGS had an active year. Consultants were provided for 69 programs; the review of 45 programs has been completed, and 24 programs are in the review process.

The Executive Committee has under consideration the expansion of consultation services beyond academic program review to certain administrative procedures in areas such as admission of foreign students, minority student recruitment and retention, etc. The Executive Committee (Board of Directors after January 1, 1979) will have this topic on their agenda during 1979.

V. Publications

The final report of "*The Costs and Benefits of Graduate Education: Estimation of Graduate Degree Program Costs*" was published in 1978. Copies are available; please let us know if you can use additional copies.

The Publication Committee has submitted draft copies of two new documents:

1. *Professional Doctoral Degrees*
2. *Requirements for the Ph.D.*

In addition, we still need to determine the format for the publication of a brochure on the "*Assessment of Quality of Doctoral Programs*". The Board of Directors will address this issue at their meetings in 1979.

At One Dupont Circle we are concerned about the CGS newsletter—*The Communicator.* In the CGS office we are giving our attention to including more subject material of immediate concern to our graduate deans. We are also reviewing the present mailing list for *The Communicator* and we are developing a new, vastly more comprehensive distribution of this publication.

VI. CGS-GRE Dimensions of Quality of Doctoral Programs

Among the central themes of last year's CGS meeting were discussions about "*Dimensions of Quality*"—a research project conducted by Mary Jo Clark of ETS. CGS is now working with the GRE Board to consult with graduate deans to decide whether the GRE Board should implement a program to assist graduate schools to assess the quality of doctoral programs, using the instruments derived from the "*Dimensions of Quality*" study. You will also note that one of the sessions scheduled for tomorrow morning is devoted to the subject of assessment of quality of master's programs.

VII. Committees and Task Forces

The staff of the CGS office has requested that the Board of Directors review the present committee and task force structure to determine its adequacy. The staff has proposed suggestions for several changes. It is likely that the Board will be able to announce several new developments early in 1979.

VIII. CGS Workshop—*1979*

The CGS Workshop for new graduate deans (and associate and assistant graduate deans) is scheduled for the second week of July (week of July 8, 1979). Dean Paul A. Albrecht of Claremont Graduate School and his colleagues are already developing plans for the workshop, which will be held at Claremont, California.

We will provide all deans' offices with more information early in 1979.

I wish to conclude my report with a few general observations, some of which I commented upon at our luncheon meeting yesterday.

This has been an extremely demanding year for the Executive Committee. Although I have been directly associated with the Executive Committee for only three months (since September 1, 1978), I am abundantly impressed by their dedication to the purposes and the good of CGS. These sentiments go in double measure to the Chairman, Dean Donald J. White.

I am also indebted to President Emeritus J. Boyd Page for his generous and readily-available assistance in accomplishing a smooth transition of the CGS Washington office administration. I wish to express similar appreciation to Dr. John W. Ryan, Ms. Ann Evans and Ms. Mary Jo Leocha, the CGS staff, for their genuinely cooperative attitude and their generous assistance.

Many of you have already corresponded with me and have taken this opportunity to share your concerns about graduate education with me. I encourage more of you to do this. Your suggestions will be very helpful for the development of a strong, comprehensive program for graduate education.

COMMITTEE REPORTS

Report of the Publications Committee

W. Dexter Whitehead

At its meeting on May 23-24, 1978 in Charlottesville, Virginia the proposed statement on the professional doctorate was edited and forwarded to the Executive Committee.

The Committee also recommended that the report of the Committee on Part-Time Students be published as a special report, with the detailed data to be filed in the central office and made available on request.

Finally, initial steps toward preparation of a statement on requirements for the Ph.D. degree were taken.

The Committee met in Charlottesville on November 20-21 and reviewed a final draft of the statement on the Ph.D. requirements which was submitted to the Executive Committee for consideration at its next meeting.

Task Force on Assessment of Quality of Master's Degrees

Bernard J. Downey

The Task Force met on September 18 and 19 in Washington, D.C. to review the second draft of characteristics and indicators which would ultimately serve as the basis for the development of modified questionnaires to be used for the assessment of the quality of master's degree programs.

Based on the discussions at this meeting, a third draft was composed by Dr. Mary Jo Clark. This draft then formed the basis of a questionnaire which was sent to all CGS members in mid-October.

The questionnaire asked the membership to evaluate the importance of each characteristic for assessing quality in master's degree programs and the appropriateness of the suggested indicators as measures of the listed program characteristics.

The results of the questionnaire are being tabulated and the results will be available for distribution shortly.

A meeting of the Task Force was held last evening, to review the questionnaire results prior to the workshop which will be held tomorrow morning.

The workshop will include three panelists:

1. Mary Jo Clark of ETS who will give an overview and brief history;
2. Bernard J. Downey, Villanova University, who will report the results of the questionnaire; and
3. Giles T. Brown, California State, Fullerton, who will give a reaction to the questionnaire results.

Committee on the Special Non-Degree Student

Norman N. Durham

Recent resource studies conducted under the auspices of the Council of Graduate Schools of the United States and the National Science Foundation indicate that growth in the number of graduate students attending institutions of higher learning is no longer showing dramatic increases. This slow down in enrollment is influenced by a steady increase in the number of job opportunities, a decrease in direct federal support to graduate students, increasing tuition and living expenses and possibly the expiration of the GI Bill benefits.

Although the rate of increase in enrollment has slowed markedly, evidence does indicate that over 60% of the graduate students attend part-time and these students represent a steadily growing segment of the graduate population. The part-time graduate students, in accordance with the report from the Committee on the Part-Time Graduate Student, during 1977 comprised 85% of the non-degree students, 64% of master degree students, 38% of students in doctoral programs. Thus the individual returning for professional development, certification, or simply the desire for personal refreshment at the academic trough, presents a common dilemma to the existing full-time student and to awarding of graduate

181

degrees associated with prescribed levels of scholarly and creative ability and performance.

It is important to realize that advanced graduate programs must meet high qualitative and quantitative standards and all post-baccalaureate offerings do not meet these criteria and should not be recognized as meeting requirements for advance degree programs. Education, in its own right, may be its own worst enemy since the need for public school teachers to earn graduate credit to be eligible for salary improvement or certification in specific areas of education, as dictated by governing boards and educational associations, provides a motivating factor for attending an institution of higher learning that is completely different from the motivation and dedication of students seeking educational and professional development within an established graduate degree program. The "learn for earn" incentive frequently provides little, if any, emphasis on the qualitative aspects of the program or on professional development. Thus, some students will attend the closest and/or cheapest institutional offering without regard for any qualitative evaluation.

During 1977-78, the Committee on the Special Non-Degree Student distributed a survey to member institutions regarding the status of the special non-degree student, related institutional policies, admission requirements, degree requirements, counseling, advisement, laboratory facilities, space, resources and faculty participation. The response to the survey was exceptionally good permitting the committee to analyze 242 responses.

The institutions responding to the questionnaire comprise an important part of the graduate degree programs within the United States. Of the respondents, 73% confer the professional master's degree, 95% confer the master's degree, 31% the Doctor of Arts or Specialist degree, 33% confer the Doctor of Education degree and 62% confer the Doctor of Philosophy degree. Thus there was considerable breadth in the academic interests and responsibilities of the responding institutions.

Enrollment of the non-degree post-baccalaureate student has greatly increased during the last five years and nearly all institutions indicated they expected enrollment of students in this status will continue to increase. Some 77% of the institutions indicated that non-degree post-baccalaureate students are enrolled through the graduate college and this was the most desirable and recommended process.

The areas expecting the greatest increase in the number of non-degree students were education followed by arts and sciences, business, engineering, medical studies and agriculture, in this order. For the purpose of this survey, the biological, physical and social sciences, fine-arts, arts and humanities were all categorized under arts and sciences. Only 6% of the respondents have imposed any institutional ceiling on the number of students that may be admitted in a non-degree status. However, 41% indicated that certain departments within their institutions had established ceilings or activated constraints that limited effectively the number of students admitted in a non-degree status.

Most institutions (91%) permit credits earned by a non-degree student to apply toward a degree program. But the amount of credit applicable to meet requirements for the degree varies with the academic area involved. The majority (58%) indicated that special criteria were applied or petitions must be filed to determine if hours were applicable to a degree program. Thirty-nine percent of the institutions indicated a limit on the number of hours that could be accumulated by a non-degree student during an academic year while 89% indicated there is little, if any, pressure to remove or liberalize this limit.

In most cases (77%), students seeking admission to the non-degree status must supply official transcripts, while 67% of the respondents indicated their institutions differentiated between the areas of continuing education, professional education and graduate education. A large majority (78%) indicated that this differentiation should be encouraged, expanded and enforced. Most of the institutions (66%) indicated the non-degree status was used administratively to enroll students who were admissable but had not completed all paperwork relative to formal admission and 71% indicated the non-degree status could be used by graduate students as a probationary period, although 73% reported that less than 10% of their students fell in this category. Only 26% of the institutions indicated their academic programs focused on a particular clientele with regard to enrollment of non-degree students.

It was the consensus, 71% that some type of recognition or certification is important to the non-degree student. But only a few institutions (26%) provide a certificate, plaque or other form of recognition for hours taken as a non-degree student. Respondents (85%) did not support the concept that a special accreditation program for non-degree post-baccalaureate education was necessary and 86% opposed development of a terminal master's degree for the non-degree generalist student. Although 52% of the institutions did indicate that the transcript from their institutions distinguished between hours taken as a non-degree student and hours taken in the status as an official degree candidate, the majority suggested it would be desirable to establish criteria to assist graduate deans in evaluating credit earned by students in the non-degree status and in those cases where hours taken in the non-degree status could be used to meet degree requirements, 91% of the institutions agreed that the graduate dean must be delegated and assume responsibility for quality checks. Most (75%) supported the concept that CGS should establish criteria to aid graduate deans in evaluating credit earned by students in the non-degree status and in establishing quality check points, while a large majority of the respondents (95%) indicated that non-degree post-baccalaureate education should be of significant concern to graduate deans and faculty involved with graduate education.

The consensus of responding institutions is that the non-degree student enrollment is and will continue to be of increasing importance to all institutions offering work at the post-baccalaureate level. Accordingly, guidelines prepared by the Council of Graduate Schools in the United States noting criteria to assist in evaluating credits, reviewing transfer of credits, establishing quality check points and defining other areas of responsibility for the non-degree student in the advanced graduate studies program would be extremely useful.

Recommendations:

1. Graduate deans be designated by their institutions and accept the responsibility for quality checks on all post-baccalaureate enrollments. These include admission, comprehensive and qualifying examinations, faculty advisement, program requirements, etc.
2. Institutions have a commitment to meet the increasing educational needs of their publics and use a variety of educational processes to accomplish this object. Thus the credentialing or validating of previous educational experiences will emerge as an increasingly important problem. It is critical that the qualitative and quantitative aspects of academic offerings be continually reviewed and distinct guidelines prepared to differentiate program offering in advanced graduate studies, certification, and/or professional areas. In any event, all courses offered for graduate credit by an institution, whether on-campus or off-campus, must be approved and administered through the graduate dean's office.
3. Every effort should be made by the institution to assure that the quality of academic offering in the advanced graduate degree programs does not deteriorate as a result of influx of non-degree students.
4. Institutional offerings that have not been approved for graduate credit and, therefore, can not constitute a component of an official advanced degree program should be offered for "non-credit". Also, it would be highly desirable if official transcripts reflected more clearly and accurately the status of the student with regard to admission to a graduate program, i.e. graduate-degree candidate, courses apply to certification, non-degree-no credit, etc.
5. Institutions should give careful consideration to transfer of credits by non-degree students from one institution to another and should consult the CGS publications entitled: *Graduate Credit: Its Recogni-*

tion and Transfer. It is recommended that work to be transferred must officially be certified as graduate level and the individual must have been admitted to the graduate college at the time of enrollment.

Motion From the Resolutions Committee

Charles T. Lester

Whereas Boyd Page served the Council of Graduate Schools faithfully, diligently and intelligently for nine years as President

and

Whereas the Council under his leadership has steadily increased its membership and now has a membership embracing every institution with any significant graduate program

and

Whereas under his guidance and direction the Council has conducted several significant studies of almost every aspect of graduate education

and

Whereas he has sought to avoid divisiveness and has promoted those actions by the Council that emphasize the common goals of its members

and

Whereas Boyd Page has shown the Council of Graduate Schools opportunities to improve its services and to respond to new challenges

and

Whereas Helen Page with her charm, beauty and grace has been a joy to all of us

and

Be it therefore resolved that this Council express to Boyd and Helen Page our esteem, our appreciation and our best wishes for their new life that lies ahead

Be it further resolved that a copy of this resolution be presented to Boyd and Helen and further that this resolution become a part of the official record of this eighteenth annual meeting

Whereas Dr. Sam Webb, who for many years was Dean of the Graduate School at Georgia Institute of Technology, served the Council of Graduate Schools continuously and effectively as a valued member of many committees and panel member of many discussion groups at national meetings of the Council and

Whereas his sudden and untimely death robs us all of a cherished colleague and a warm and friendly human being

Be it resolved that this Council by the adoption of this resolution express its sorrow at losing Sam Webb from its midst and be it further resolved that this resolution become a part of the official record of this eighteenth annual meeting and that a copy of this resolution be sent to Mrs. Sam Webb.

Phyllis Pray Bober

Whereas Deans Eastman N. Hatch, Utah State University, J. Knox Jones, Texas Tech University, and J. Chester McKee, Jr. (as Past-Chairman) with this meeting retire from the Executive Committee (henceforth Board of Directors) of the Council of Graduate Schools in the United States; whereas they have rendered selfless, devoted and enduring service on behalf of their decanal colleagues to this organization as well as to the wider community in graduate education; and whereas further they have individually and severally contributed their clarity of vision and manifold gifts, imagination and wit to the enterprise; be it resolved that these *Proceedings* record the appreciation, admiration and best wishes of a grateful membership.

Be it further resolved that this same resolution express the abiding (to use one of his favorite words) gratitude of the members of the Council of Graduate Schools for the inspired leadership over the past year of our Chairman, Dean Donald J. White, together with pleasure at the prospect of continuing to enjoy the benefit of his wisdom, experience and unfailing good humor as Past-Chairman on the Executive Committee during the year to come.

Mr. Chairman, I so move . . .

Whereas, with the aid of his committee, the Program Chairman for the 18th Annual Meeting of the Council of Graduate Schools, Dean Robert F. Kruh—whom we welcome as incoming Chairman—has brought into being this robust fare, these richly varied and provocative sessions which are still under way; whereas furthermore Dr. John Ryan, with the assistance of his staff—in particular Miss Mary Jo Leocha—and abetted by Felipe Ortiz of the Towne and Country Hotel staff, has carried out the arrangements providing a comfortable setting far from the cares of office and intemperate climates elsewhere; be it resolved that our *Proceedings* record the enduring gratitude of the entire membership to all these responsible for our content.

NEW BUSINESS

Report of the Nominating Committee

Mary Ann Carroll

This report is presented on behalf of the members of the nominating committee who are Giles T. Brown, California State University, Fullerton; J. Knox Jones, Jr., Texas Tech University, and James H. Reeves of Tennessee State University. In selecting the nominees from those recommended to us by the CGS membership, we have tried to insure that the Board of Directors for the coming year will be representative in terms of the kinds of institutions that have membership in the CGS. We also kept an eye to geographic distribution.

Our nominees for three year terms to the Board of Directors are Bernard J. Downey, Villanova University, Irwin C. Lieb, University of Texas, Austin and C. J. Pings of the California Institute of Technology. Nominated for a one year term is Dexter Whitehead, University of Virginia.

Donald J. White

You have heard the report of the nominating committee which comes with an automatic second for adoption. Are there other nominations? Hearing none, all in favor of the report of the Nominating Committee with respect to filling vacancies on the Executive Committee, say aye! Opposed! Unanimously adopted.

Mary Ann Carroll

Nominated for membership on the Nominating Committee for 1979 are Dale Comstock, Central Washington State University, Phillip Johnson, Oakland University, and Alicia Tilley, Memphis State University.

Donald J. White

You have heard the report of the Nominating Committee for nominations on the nominating committee for the forthcoming year. Are there any other nominations? Hearing none, all those in favor of the report say aye! Opposed! Unanimously adopted.

Last, but surely not least, I have the pleasure to thank all of you. I am very indebted to all of you. Now, I wish to introduce you to Bob Kruh, our new Chairman, who is as you know well from the fine program he and his colleagues put together an extraordinary and fine person. Bob.

Robert F. Kruh

Despite Don White's disclaimer to the contrary, he does take his work very seriously. He has great wit and a sense of humor. He is an eloquent man who has worked tirelessly for CGS. He has provided uncommon good sense and leadership for this organization in a year of transition. He has served us and graduate education magnificently. I can only say, that he is one fine fellow.

Don, even though you are leaving the Chairmanship, I am pleased that you are not leaving the Board of Directors because we will have the benefit of your good counsel and wisdom.

I now declare this meeting adjourned.

Concurrent Special Interest Sessions

Friday, December 1, 1978, 8:30 a.m.-10:00 a.m.

THE VITAL ROLE OF RESEARCH IN GRADUATE EDUCATION

Chairman: Eric R. Rude, *University of Wisconsin-Madison*
John B. Slaughter, *National Science Foundation*
Lloyd M. Benningfield, *Wichita State University*
Donald N. Langenberg, *University of Pennsylvania*
Cornelius J. Pings, *California Institute of Technology*
Susan G. Broyles, *National Science Foundation*

Eric R. Rude

I am pleased to be chairing this session which relates to the graduate deans' role in research—which is an integral and important aspect of graduate education. It is my personal feeling that until last year the research responsibilities of the deans had not been given appropriate emphasis in our annual meetings. As you remember, Chancellor McElroy in his keynote address on Wednesday noted the vital role of research in graduate education.

Some of the suggestions I wanted to make have, happily, been negated by several of the latest CGS activities which were outlined yesterday by President Pelczar. For example, there are a number of federal regulatory pronouncements and appropriations which either have had or will have significant impact on university research. Their effect on research *might* have been modified had there been a strong, unified voice from graduate deans.

Let me illustrate: OMB Circular A-21 (March 1978) contains proposed revisions to governmental regulations regarding reimbursements of costs to universities performing federally sponsored research. The Committee on Governmental Relations (COGR) of the National Association of College and University Business Officers (NACUBO) has been working extremely hard to bring about changes in these regulations so that there can be reasonable and practical administration of the rules. I was pleased, as I noted earlier, to hear Dr. Pelczar say that we now have a working relationship with COGR.

It is now my privilege to introduce Dr. John B. Slaughter.

189

Since the fall of 1977 he has served as Assistant Director of the National Science Foundation for Astronomical, Atmospheric, Earth, and Ocean Sciences. In July 1979, he will begin his tenure as Academic Vice President and Provost at Washington State University.

Prior to joining the National Science Foundation he was Director of the Applied Physics Laboratory and Professor of Electrical Engineering at the University of Washington and for fifteen years before that he served as the head of the Information Systems department, Naval Electronics Laboratory Center, San Diego.

He received his B.S. from Kansas State University, M.S. from UCLA, and Ph.D. from the University of California-San Diego.

He has been active in efforts to encourage minorities to pursue careers in science and engineering and in 1976 he was appointed a member of the National Academy of Engineering Committee on Minorities in Engineering.

John B. Slaughter

It is always a pleasure for me to return to San Diego. My family and I lived here for 19 years until 1975 and we consider it to be one of the finest places to live in this country. I thank you for inviting me here to join you at this important meeting.

When I went to Washington to serve as an Assistant Director of NSF in August 1977, there seemed to be a number of growing concerns about federal policy toward graduate education and university research. One of the main concerns was the level and consistency of federal funding for basic research.

The National Science Board, as many of you know, this year issued a very important report of concern to all in the research community. It is entitled: *Basic Research in the Mission Agencies*. The report contains fairly clear evidence that we were not just crying wolf. According to the study, "basic research enjoyed an average annual growth rate in federal support of 4.3 percent from 1968 to 1976." That sounds good, but the kicker to that statement is that the study found that the growth rate in constant dollars—that is, measured by 1972 dollars—had actually *decreased* by 1.8 percent annually, and by a total of about 10 percent between 1969 and 1976.

The encouraging news we now share is that this downward trend of real dollar commitments has been reversed. As the Science Board report notes, "current-dollar growth rate (for federally funded basic research) escalated sharply in 1977 at a rate of 13.6 percent." The President's current fiscal year budget represented a further 9.3 percent gain. The estimate for basic research for fiscal year 1979 is equally encouraging. The figure is about $3.6 billion, which should be about an 11 percent gain. All of these percentage gains should more than compensate for inflation.

So we can observe in figures for the last three federal budgets a very heartening increased emphasis on basic research. The slippage of the past several years has halted. We have cause for hope that the nation's commitment to basic research once again is intensifying.

But if our concern about the level of federal funding for basic research has reason to diminish, other of our concerns have yet to be alleviated. I refer in particular to the continuing mismatch between this nation's very impressive research capability and the dollars—specifically federal dollars—available to take advantage of this capability.

In two sentences contained in another report to the Congress issued late last year, the National Science Board summed up the problem and suggested the dimensions of the loss involved in terms of stymied careers and thwarted promise. The Board reported:

> "Despite a decade of readjustment, there remains a mismatch between research opportunities and available resources and a lack of continuity and stability in research support. An expanded (and still expanding) number of capable scientists—many of whom were trained during the past two decades and who now should be in especially productive periods of their careers—find it increasingly difficult to obtain the support required to conduct their research."

The mismatch the Board describes particularly affects the research opportunities of relatively new investigators, who are defined as those who have received their doctoral degrees during the past seven years. One aspect of the lack of opportunities for new investigators has been widely noted. Both because of demographic factors and the apparent reduced interest by students in some fields of science, the demand likely will diminish for science teaching capacities in the nation's colleges and universities.

Census Bureau estimates are clear about the demographics of the situation. They show that the number of 18-year-olds in the nation's population will decline by 19 percent in ten years, from 4.2 million in 1980 to 3.4 million in 1990. You are as familiar as I with these figures. And we both know their significance. There are—and will be—fewer openings for new faculty. The result could be a slowdown of the nation's basic research efforts.

And, indeed, some figures are not encouraging. The National Science Foundation projects that by 1985 a total of about 210,000 students will be pursuing advanced degrees in the sciences and engineering. That is about 15 percent below the peak year of 1970. In the physical sciences, enrollment peaked at 41,000 in 1968, dipped 12 percent by 1973, and is expected by 1985 to decline 55 percent below the 1968 level.

That slowdown could be the most serious of several factors of instability which have tended to affect basic research during the past dozen years. To gain perspective on our current condition, let's review those years.

In the late 1960's and early 1970's, federal funding for basic research shifted downward both in constant dollars—as we have seen—and in individual fields of science. Those shifts were a source of marked instability in the financial condition of universities and colleges. Now, at a time when federal support for basic research has reversed that downward trend and is increasing at an encouraging pace, the anticipated decline in the need for new faculty indicates new and pressing financial and personnel problems for university- and college-based research.

The question before us—one of the major concerns of all of us interested in the welfare of graduate education and the advancement of knowledge—clearly is: What can be done to ensure continuing opportunities and openings for new investigators within the university?

One answer begins to emerge as we survey the development of the postwar American university. As H. Guyford Stever, a former NSF director, has remarked:

> Growth of educational institutions over the past three decades has proceeded in two distinguishable directions and has been swept along by two separate streams of motivation. We have seen explosive growth of both undergraduate education and graduate education coupled to research. But while these functions are preformed by a single set of institutions—the universities and colleges—the motives and driving power behind the expansion of the different functions have come from quite different quarters.

The growth of undergraduate education was stimulated by rapid increases in the college-age population and by socio-economic forces that placed a high premium on a college degree as a charter for advancement. The reasons for the expansion of research and graduate education are equally well known. That expansion was seen to benefit the well-being and security of the nation. This judgment provided the rationale by which the federal government became the principal source of support for research and the development of graduate education.

So we can observe postwar universities both teaching a record number of undergraduates and engaging, at the graduate level, in a wide variety of research.

The norm for the postwar years has been that about half of young doctorals went into teaching positions. But that pattern is rapidly breaking apart with the decline in the number of undergraduate students and with what has been aptly described as "tenure clog." It is clear to us all that relatively few tenured faculty members will reach retirement age during the next dozen years, and so there will be relatively few openings on faculties for younger scientists. Already, we have seen the decline of faculty openings. For example, between 1968 and 1975, the proportion of young faculty members dropped from 42 percent to 27 percent. In physics, the drop was from 40 percent to 19 percent.

A moment ago, I alluded to one possible response to the problem of assuring continued capability for basic research in the university setting and thus continued opportunities for young investigators. The factors controlling the problem—the demographic trends and university hiring policies we have noted—are beyond the reach of federal policies that are determined in Washington. So this response has no one's official endorsement. It originates not at the National Science Foundation—or any other Washington agency, for that matter. Rather, it is an idea now being expressed around the nation. I feel it deserves your attention.

The idea is that universities, unable to offer teaching positions to young doctorals because of "tenure clog," may want to consider establishing separate research institutes where young scientists can do research and some senior faculty members can accept positions, thus opening up new teaching positions. In turn, young researchers attached to a university's institute could teach at the university as part of an affiliate faculty. At the end of five years, or some other designated period, the university could review whether to continue its institute.

There are many variables to this idea of a university institute. It likely could have the capability of attracting additional federal funding and, also, support from private industry. A separate research institute might be an attractive alternative to those who suggest that university graduate schools turn more to research and take on research-oriented faculty members and students who are not necessarily expected to be teachers. Research talent could funnel from the graduate school to a university's separate institute. This talent would carry with it the sustained capability for basic research which graduate schools have developed in the postwar years.

As we consider ways to employ more young investigators in university settings and to enhance opportunities for basic research at universities, I am aware of another nagging problem which especially confronts graduate school administrators. I refer to the seemingly unending stream of federal regulations and paperwork that center on accountability in the use of federal funds and on imperatives to help meet federally set environmental and social goals.

Those responsible for dispensing or using federal funds must respond to congressional mandates. This means that federal laws and regulations must be complied with and that there be full accountability for federal funds spent. But at the same time my colleagues and I at NSF are also mindful of the importance of preventing you from being burdened with unnecessary red tape and regulations. Often there are unintended impacts of regulations that deter and inhibit you from accomplishing the substantive work under a federal grant or contract.

If, for example, the rules and regulations end up discouraging innovative talent from undertaking research or detract from its quality, then federal funds have been wasted despite the best of bureaucratic intentions. We are acutely aware of this irony, and, as the agency in Washington most concerned with the health of the basic research establishment, we are trying to do something about it by making those who are responsible for setting federal policy aware of your concerns.

As evidence of the Foundation's attempts at consciousness raising, let me cite again the National Science Board's 1978 annual report which President Carter forwarded to Congress. An entire chapter in it is devoted to "Barriers to Optimum Support and Conduct of Basic Research in Mission Agencies."

The chapter points out that many of your concerns about excessive red tape and regulations are the same concerns voiced by several of the mission agencies. For example, listen to these observations from the Department of Housing and Urban Development about regulations of the Office of Management and Budget on the control, design, and use of survey questionnaires. HUD's observations suggest that when the great unwieldy federal machine attempts to slice through red tape, the results can be, paradoxically, more nettlesome than before. HUD said:

> These regulations, when taken together with the current government-wide drive to reduce paperwork burdens on public and private industry, are so onerous as to be an effective barrier to the performance of many social-science research projects. Surveys of a properly drawn sample population are, in fact, among the most effective means of reducing paperwork burdens, when contrasted with typical government requests for information from an entire population. Yet surveys are being treated by OMB as though they are just another paperwork burden.

From the former Energy Research and Development Administration came these observations about the requirements for accountability reporting and the effects of red tape on the operation of research. ERDA said:

> . . . it is generally true that there has been, in recent years, both internally and externally, a proliferation of bureaucratic procedures, requirements, uncertainties in organization and calls for ever increasing paperwork and studies—all of which have absorbed large proportions of the time of program administrators and laboratory and university investigators. Inefficiencies are one consequence. An even greater concern is the tendency of these demands to dispel creativity and vision.

ERDA's statement is representative of those of several of the mission agencies. And, as I said, we at the National Science Foundation share the concerns of the mission agencies—and you—about these matters.

I suggested at the beginning of these remarks that I had been in Washington long enough to know the federal government is not omnipotent in solving the problems of the nation. It certainly is not able to remedy alone the problems confronting graduate school education.

The initiatives for solving the challenges facing this nation's system of university based research and of graduate education will flow from you. Where the federal government can assist those initiatives, I believe it will. But it will be you who must, and will, give opportunities to young scientists. Your creativity is coming into play once again, as it has done in fashioning the spectacular record graduate schools have earned since World War II.

As our system of graduate school education and research evolves to accomodate the changes of the next decade, I believe the federal government will continue to help bring about that evolution. As partners in fostering research and higher education, we must acknowledge the reality of policies our nation has set that affect your institutions. Where federal regulations unintentionally intrude on the proper growth of research and graduate education, we must work together to make their implementation less burdensome.

Indeed, let me assure you that the comments and ideas you express today—about federal rules and regulations, about sustaining a high level of basic research in the university graduate school setting, about assuring fruitful careers for younger investigators—will be actively considered as we at NSF formulate our programs for the future. And we will relay to other interested Washington agencies your observations and suggestions.

Lloyd M. Benningfield

Our topic today is certainly one of concern to nearly all persons involved with university graduate education—not just those concerned with the research aspect of it. In fact, many of us would say that research is the ultimate form of teaching at the graduate level and perhaps to some extent at the undergraduate level. If you have attended recent meetings of NCAR, NCURA, or CGS, you have heard various forms of pleas concerning the dilemma of universities in maintaining or developing research; in working with the federal government in obtaining support for this research; and in convincing constituencies of the necessity of such research enterprises to the total mission of universities. There obviously is a problem when so many intelligent, well educated persons spend so much time wrestling with an issue. But has anything really happened as a result of such concerns?

We have just heard of the reversal of the downward trend of federal support for basic research in the last three federal budgets. When we consider inflation and the increased number of university programs and researchers aspiring to get "their piece" of this funding, has much really changed? As a representative of a developing, regional, state university of medium size—some 16,000 students with fourteen years history in the state system—I am not sure that I believe that there has been improvement in support of research at the federal level.

From my perspective I believe that it is important to consider some of the environmental factors faced by institutions such as mine as we attempt to develop and improve our programs. To start with, the rising expectations many persons had some ten to fifteen years ago have run into serious obstacles. As we have heard, the population trend has seriously curtailed the traditional student population base. While many persons still want credentials, few are willing to do the rigorous programs appropriate to traditional credentials—namely graduate degrees. Even fewer persons are willing as taxpayers to support anything with the word research in the label.

The above trends are not reserved for universities such as I serve but also for our research universities to some extent. In addition, our research universities were geared to on-going federal support and to growth in student population and as a result have faced serious problems of a different sort and magnitude than have developing institutions.

A rather different aspect of the dilemma faced by developing universities has been the clear evaporation of any need for new doctoral programs in most standard areas—and perhaps in all areas. This clearly imposes a real problem of "image" as such universities deal with their constituencies. Accompanying this is the apparent lessened need for the higher level research typically associated with doctoral programs and the negative impact this has on our faculties whose members were recruited with certain expectations related to research and research facilities. As mentioned in our opening address, the mismatch of capable faculty and the support or even the opportunity to do research for which persons were educated is a serious problem.

The increased number of doctoral program graduates from our research universities in the late sixties and early seventies coupled with the leveling of the number of faculty positions in research universities have improved our ability to recruit good faculty. Nevertheless, we still have to compete with the major established universities on many fronts. Specifically, the areas of research facilities and good students are critical for us. What are we to offer faculty as they struggle for tenure and salary increases with scholarly activity as the typical criterion, if the research programs cannot be justified and funded? Of course, my tone is too pessimistic—something I keep reminding myself not to project. Faculty really interested in research will find a way or ways to do it although such efforts deplete the energies left for the research itself. This is where we administrators can help by cutting red tape, by helping to find dollars, and by being generally supportive.

A particular area of concern that occurs in the sciences and in engineering relates to research facilities. In many cases such facilities are very costly and become rapidly obsolete as we have heard even from our research university colleagues. When we compete for the limited funding available for such tools of research, we frequently compete head-on with our neighboring research university colleagues and come off second best in many cases. The argument is that the nation or region or state simply doesn't need another such research facility. Perhaps this is true. Nevertheless, such problems compound our situation.

Expansion of the previous comments leads me to mention what is a logical tendency of funding agencies. In competitions for funding the agencies tend to support the tried and proven, the best bet, the university where a larger team exists—the research university—not that I wouldn't do the same thing, if faced with the choices that appear most evident. However, this approach does little for the single investigator at a developing institution. I am merely pointing to the reality of a situation that we must face. Do we really want this changed? What would you do if you held the power to decide and how do you reconcile this with the desires of many more universities to participate in federal funding of research?

What should developing universities do in this environment which challenges the existence of research as associated with graduate education? We can and had better learn to deal with it and not simply wring our hands if we expect to survive. I would suggest that we can do several things. We can better focus our efforts in specific fields relevant to our own local and regional needs. In addition to federal support, there may very well be local support for research and graduate education in more narrowly defined areas. While applied research may not be as attractive or prestigous as theoretical research, it is important and need not be demeaned when done well.

We can work to reestablish or enhance the quality in our master's programs including a research component. While a number of professional master's programs such as the MBA, the MEd, the MPA, etc. may not have national research standards, we can work to incorporate a research component in them in the form of independent or directed study or through some alternate means.

A serious look should be given to cooperative ventures with research universities or research institutes. We have found this to be highly beneficial in some well considered cases where faculty members tend to be isolated because of their specialties. While work with institutions in close proximity is probably desirable from the communication and sharing standpoints, it is possible to work cooperatively with distant institutions as we have with locations such as the University of Pennsylvania and the University of Illinois. Cooperative ventures, however, can pose problems and must be well coordinated.

Our speaker's proposal for separate research institutes associated with universities presents an interesting approach. While it appears attractive from a conceptual standpoint, the realities of financing and other cost problems need careful consideration. Such an approach might be feasible for the research universities, but probably not for many developing universities unless there is significant long term support from other than the federal government. Consideration might be given to such a separate institute concept on a statewide, regional, or population density basis. This concept would not appear to be much different than some research foundations which have been around for years.

The matter of regulations mentioned by Dr. Slaughter is an important one for developing universities. We are all going to have to live with regulations and had best learn to deal efficiently with them. Perhaps in this area, developing universities have an advantage over the research universities. We don't generally have long established structures and can modify organizationally more easily than older institutions. Hopefully, we will do so to lessen the demoralizing and diversionary burden the plethora of federal and state regulations places on our faculties. One word here to the Washington establishment—become consistent in issuing regulations and consolidate such rule making so that a hundred different agencies don't have five hundred different sets of regulations.

Finally, we need to be more realistic about our expectations and base them on logical and intelligent thought. We all need to take a hard look at the "mentality of growth" that seems to have existed since World War II. Somehow, everyone, not just researchers or university personnel, has come to believe that only if there is always "more" can we survive. Management is certainly easier in such a growth environment. The growth mentality is a very interesting animal and certainly a pervasive one. Hopefully, we can develop and sustain research related to our graduate programs even in an environment that may not have much growth in funding, faculty or students.

D. N. Langenberg

I want to focus my remarks in response to John Slaughter's presentation on just one issue he raised. Before I restate the issue in the form of a question, let me list some assertions and assumptions on which I think the question is based:

1. A vigorous effort in fundamental and applied research is essential for our national welfare and, quite possibly, survival.
2. The leading edge of this nation's fundamental research enterprise is, and should continue to be, located in our universities.
3. In recognition of the foregoing, our society will maintain and even increase its substantial support of research in our universities. It will do so primarily through the federal government.
4. Demographic and economic conditions will force changes in the way our universities do research. These changes will affect, among other things, the way we provide graduate education.

These lead to the . . .

Question: What should and must our universities, and graduate deans in particular, do in response to these impending changes?

Since I have no simple answers to this question, I probably should now simply keep quiet and sit down. However, an academic with an audience rarely does anything so sensible, so let me comment further on my assertion, assumptions, and question.

First, my assertion about the importance of research: This is not the place for an attempt to support this assertion with logical arguments. Most if not all of you are already believers, and convincing any nonbelievers who may be present would take much more time than I have. Instead, let me try to communicate the depth of my own belief in the truth of this assertion.

Before I became an effete Easterner, I spent my youth in the Midwest, where I acquired enduring respect and, indeed, affection for that much maligned creature, the hog. Those of you who have watched a hog foraging in the woods will recognize the similarity between this activity and what a researcher does. The hog may be engaged in keeping body and soul (?) together by collecting acorns, but he is fully prepared to make good use of any other tasty morsel which his persistent investigation may reveal. If luck and design take him to the right part of the right forest, he may even unearth a truffle, a discovery which, were he a human scientist, the Swedish Royal Academy might reward. However enjoyable this activity may be for the hog, it is also essential to his survival, in accord with the ancient and homely injunction, "Root, hog, or die!" Parenthetically, it might be noted that most foraging hogs do better than simply survive, and constitute a species some believe to be the second most astute, formidable, and dangerous on the face of the earth.

My point here is this. We live in a forest of ignorance. We are beset by problems of all kinds. Knowledge will not necessarily lead us to solutions for all of them, but ignorance will surely help us solve none of them. Our welfare and perhaps our survival depend on our continuing and persistent search for morsels of new knowledge. Yesterday's acorns will not satisfy tomorrow's needs. We must press on, for "Root, hog, or die" applies as much to our species as to the hog's.

Now to my second assertion, that our universities must continue in their present leading role in the nation's research effort. There are philosophical and cultural arguments for this position, but I think the case can be made solely on the basis of demonstrated efficacy and efficiency in producing research results, certainly in basic research. There are other kinds of institutions in which one might imagine lodging responsibility for the nation's basic research effort, e.g., government laboratories or independent research institutes. However, note that, by many measures, the United States has had the world's most successful basic research enterprise for several decades, and its universities have been the home of the bulk of that enterprise. I think there is a causal connection between those two facts. (We might also note that the only nation with a higher per capita Nobel Prize performance in the post-war era, Great Britain, has also concentrated its basic research in universities.) There is something about the university environment, with its emphasis on unfettered inquiry, its fertile mix of young and old, apprentice and master, and its multiple interrelated functions of research, instruction, and service, which facilitates discovery in a way unmatched by other institutions. It is untidy, confusing, often illogical, even anarchistic, and as hard to explain as the origin of the tone of a Stradivarius, but it works. If we want the best research at the least cost, we must find ways to assure the continued strength of our research universities.

My third assertion, that society through public and private channels will continue to support research in universities, is really an assumption, as well as a fond hope. Fortunately, despite the ups and downs of recent years and the idiocies of a few public figures, there is no real evidence that this assumption is seriously incorrect. There seems to be a growing appreciation that we can no longer base our national strength largely on our patrimony of natural resources but must learn to live by our wits. There is increasing awareness of our dependence on knowledge and know-how. Examples abound, beginning with that oldest and highest of all high-technology industries, agriculture. The present federal administration, particularly, has repeatedly articulated the importance of research and acted to strengthen its support. My only real concern on this score is that the pressure of near term problems will become so great that we will neglect to pursue vigorously the knowledge and understanding we will surely need in the long term.

The truth of my fourth assertion, that the demographic and economic realities will induce changes in the way universities organize their research programs, is almost self evident. Population statistics leave little doubt that we will have fewer undergraduate and graduate students in the near future. This means that every aspect of a university which depends in some way on student numbers, e.g., faculty positions and tuition income, will change. What the economic future will bring is less clear, but I have encountered few expansive optimists. If we assume, as I do here, that the nation's requirements for basic research will continue or increase, and that the universities will continue to be the principal performers of basic research, then it is clear that "business as usual" is not one of our options. We must inevitably devise new ways to organize ourselves for the performance of research. This may mean research institutes associated with universities, as suggested by Dr. Slaughter, or it may mean the appointment of substantial numbers of nonfaculty or "research" faculty staff members. Different universities will respond in different ways, but however they react, the results will create new problems for the graduate dean. Hence, my question, which is really a statement of the challenge we face: What changes in the nature of our graduate programs can we expect, must we make, or should we permit as a result of the coming changes? For example, what will be the consequences if a large fraction of the active and capable potential research dissertation supervisors associated with a university are not members of the regular faculty and do not participate in the planning and operation of its graduate programs, while more and more of the regular faculty who do so participate become inactive in research? Questions like this are not unprecedented—some universities have had large semi-independent research laboratories associated with them for many years and have had to face such questions. But for many institutions they will be new. My message here is simply that these problems are coming and coming fast. We had better start thinking seriously about them. The initiative must be ours!

Eric R. Rude

Dean Pings is currently serving as Director of the National Commission on Research, which is chaired by Professor William Sewell of the University of Wisconsin-Madison. The Commission, in cooperation with designated federal agencies and the university community, intends to examine the process by which the federal government supports academic research, and propose changes designed to improve that process.

The Commission is sponsored by a number of national education associations and has the active cooperation of the Office of Science and Technology Policy, the U.S. Department of Health, Education and Welfare, the National Science Foundation and the General Accounting Office.

Even Dan Greenberg is optimistic about the outcome of its deliberations, especially since the Commission has received endorsements from persons as disparate as Frank Press, the President's science advisor, and Senator William Proxmire, of Golden Fleece fame.

C. J. Pings

In late September of this year, a National Commission on Research was established by six prominent educational groups to propose changes in how the federal government supports academic research. The Commission was established by the Association of American Universities, the National Academy of Sciences, the American Council on Education, the National Association of Land Grant Universities and Colleges, the Social Science Research Council, and the Council of Learned Societies. William H. Sewell, professor of sociology at the University of Wisconsin-Madison, will serve as chairman of the Commission, which consists of 12 leaders in education, business and government.

In recent years, many involved in government research, including scientists and administrators in both government and academe, have become concerned that the mechanism of funding is beginning to interfere with the research effort itself. Many observers charge that the burdens of seeking and administering federal funds have become so cumbersome, costly, and complex as to weaken the research effort and the institutions where that research takes place. The increasing complexity of funding has strained the relationships among the participants, and eroded their sense of shared objectives and mutual understanding that is essential to do the best and most efficient science possible.

Our long-term scientific and technological progress is vitally dependent on effective university research, and this Commission will attempt to alleviate the serious problems that appear to be hindering it, with regard to government research funding policy.

We expect the Commission's studies to last about a year during which time we hope to review the entire range of problems and controversies over how the federal government funds academic research. At the end of that period the Commission will issue a report recommending necessary changes. It is possible that the Commission review will find that no major changes are necessary, and that only a series of evolutionary changes are needed to maintain the system of funding. However, the Commission may identify a need for a more radical revision or for the replacement of the project grant system, at least in certain cases.

Among the topics to be considered by the Commission are:

- peer review and other criteria for funding
- principles for the recovery of direct and indirect costs
- duration of grant periods
- extent of agency involvement with the substance of projects
- cost transfers and effort reports
- accountability on the part of the agency, and the investigator for the research results and expenditure of funds.

NSF ACADEMIC STATISTICS PROGRAM

Susan G. Broyles

In line with Dr. Slaughter's presentation, I would like to describe some of the data collection activities undertaken at the National Science Foundation to track research and development resources in higher education.

First, it is important to understand the purpose of our activities. The National Science Foundation Act of 1950, as amended, authorizes and directs NSF to "provide a central clearinghouse for the collection, interpretation, and analysis of data on the availability of, and the current and projected need for, scientific and technical resources in the United States, and to provide a source of information for policy formulation by other agencies of the federal government."

The Division of Science Resources Studies (SRS) of which our group is a part, engages in and supports the collection of statistical data to help fulfill this mandate. SRS collects resources data from universities and colleges on graduate enrollment, employment, and R&D expenditures in the sciences and engineering. In addition, data are supplied to us through a survey of 14 federal agencies on their obligations to universities and colleges. SRS also collects data directly from a sample of individuals after they have received their Ph.D. in a science or engineering field in order to arrive at national estimates of the entire scientific and engineering population in all sectors of the economy.

Recently we have been able to integrate statistics from these four surveys into a commonly coded structure which we call our Integrated Data Base. This data base is oriented toward institutional level records identified by individual FICE codes for each institution. Data are available for

203

all four surveys on an annual basis, at least back to 1973 and some go further back than that. Thus, the four university surveys in the Integrated Data Base form an important part of NSF's role in measuring national scientific resources. These data are available not only through our publications of *Detailed Statistical Tables* but also through use of our data tapes for which we have published a *Data User Guide*. In particular now, I would like to describe to you the kinds of data we collect from the universities relating to research and development.

The survey you are probably most familiar with is our enrollment survey of Graduate Science Student Support and Postdoctorals (GSSSP) which we mail to graduate deans or survey coordinators in all science master's- and doctorate-granting institutions on an annual basis. This survey collects data at the *department* level on the number of full-time graduate science students by source and type of support, level of study, and sex of student. We also request the total number of full-time foreign students enrolled in a particular department. Part-time enrollment is requested by level of study and sex of student. And finally, postdoctorals are reported according to their source of support (federal fellows/trainees and research associates or non-federally supported) and because of the recent interest in the flow of foreign postdoctorals, we have begun to collect this information also. Through the data collected on the GSSSP, we can thus measure (as the first part of our R&D picture) both the

CHART 1

Survey of Graduate Science Student Support and Postdoctorals (GSSSP)

1. Full-time Graduate Science Enrollment
    - —Source of Support
    - —Mechanism of Support
    - —Level of Study
    - —Sex of Student
    - —Number of Foreign Students
2. Part-time Graduate Science Enrollment
    - —Level of Study
    - —Sex of Student
3. Postdoctoral Appointments
    - —Source of Support
    - —Number of Foreign Postdoctorals

number of postdoctorals and research associates as well as the number of pre-doctoral research assistantships in science and engineering programs and their sources of support. *(Chart 1)*

The second survey in the series, the survey of Scientific and Engineering Personnel Employed at Universities and Colleges, is directed to approximately 2200 institutions, of which nearly 650 grant graduate degrees in science and engineering. This survey has collected data on the number of full- and part-time scientists and engineers employed by field and function (by this we mean either teaching, R&D, or other activity in which they are *primarily* employed); by highest degree earned and function; full-time employment by field and sex; the full-time equivalent of the total headcount, and the percent of the total FTE's which is devoted to R&D. We also request data on R&D and other technicians by field and function. Thus through the personnel survey we can account for much of the R&D effort at the university level. We are currently engaged in an examination of the best way to measure the R&D involvement of scientists and engineers in academia which may change our reporting concept to an FTE basis in future survey years. *(Chart 2)*

The third survey completed by the institutions is NSF's survey of Scientific and Engineering Expenditures at Universities and Colleges. Conducted annually since 1972, it includes all institutions with $50,000 or more in separately budgeted R&D expenditures (approximately 600).

CHART 2

Survey of Scientific and Engineering Personnel Employed at Universities and Colleges

1. Full-and Part-time Scientists and Engineers
    —By Field and Function
    —By Highest Degree Earned and Function
2. Full-Time Scientists and Engineers
    —By Field and Sex
3. Headcounts and FTE's
    —By Field
    —Total FTE's and Percent Devoted to R&D
4. Technicians
    —By Field and Function

The first item requests current expenditures for separately budgeted R&D in the sciences and engineering by source of funds (federal, state, or local government, private sources, institutional funds, etc.) and type of activity (either basic or applied research or development). Item 2 requests a breakdown of total and federally-financed expenditures for separately budgeted R&D by field of science. We also request data on current expenditures for instruction and departmental research by field as well as capital expenditures for S/E facilities and equipment for research, development, and instruction by field and source (total, Federal all other). *(Chart 3)*

The final survey as I mentioned before is the survey of Federal Support to Universities, Colleges, and Selected Nonprofit Institutions. Data are collected annually from federal agencies on funds obligated for support of research, development, and other scientific activities (including obligations for R&D plant) to all academic and nonprofit institutions. Thus data are supplied by the funding agencies for individual institutions according to the dollar amounts obligated for

Research and development by field of science

Fellowships, traineeships, and training grants by field of science

R&D Plant

Facilities and equipment for instruction in the sciences and engineering

General support for science

Other science activities

Nonscience activities

It should be noted that the obligation data acquired from federal agencies differ from expenditure data acquired from institutions in that obligations represent contract or grant *awards* made during the fiscal during the fiscal year, while institutional R&D expenditures from those obligated funds may occur over several years into the future. *(Chart 4)*

So, with these four pieces of the R&D puzzle, we get a fairly good picture of the activities and resources available at the university level. For analytical purposes institutions may be studied separately or grouped together by common characteristics such as Carnegie Code, institutional control (public or private), highest degree offered by the institution, geographic location, or any combination of these.

The data collected through our four university surveys relate directly to the topic of this plenary session—the vital role of research in graduate education. If you examine the federal obligations data you can readily see that total federal support to universities and colleges has been increasing

208

CHART 3

Survey of Scientific and Engineering Expenditures at Universities and Colleges

1. Current Expenditures for Separately Budgeted R&D
   —By Source of Funds
   —By Type of Activity
2. Total and Federally-Financed Expenditures for Separately Budgeted R&D
   —By Field of Science
3. Current Expenditures for Instruction and Departmental Research
   —By Field of Science
4. Capital Expenditures for S/E Facilities for Research, Development and Instruction
   —By Field and Source

CHART 4

Survey of Federal Support to Universities, Colleges and Selected Nonprofit Institutions

From Funding Agency, by Institution, for:

Research and Development by Field of Science

Fellowships, Traineeships and Training Grants by Field of Science

R&D Plant

Facilities and Equipment for Instruction in the Sciences and Engineering

General Support for Science

Other Science Activities

Nonscience Activities

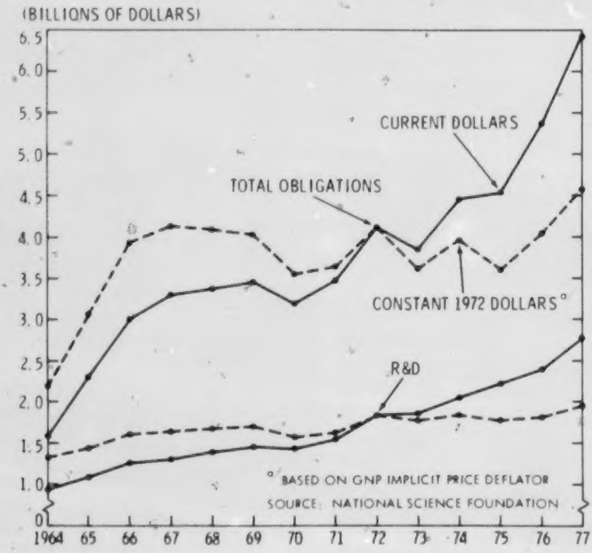
since 1973 in terms of current dollars. By applying the GNP implicit price deflator to look at these figures in 1972 dollars, we can see that the increase is still there in the later years but the drop in FY 1975 is more apparent. Federal obligations for research and development account for 43 percent of the total federal support to higher education, thus it is important to realize that these funds are also increasing even in real terms, although at a much slower rate. Current presidential budget initiatives call for continued increases in federal R&D support, although with the tight budget predicted for fiscal years 1979 and 1980, these increases may only match the rate of inflation. *(Chart 5)*

On the other hand, we can examine the dollars actually spent for R&D at universities and colleges. Federally financed R&D expenditures comprise more than two-thirds of the total R&D effort, both of which continue to rise in current and constant dollars.

From 1968 to 1977, total expenditures for R&D in the university sector increased from $2.1 billion to $4.1 billion—more than 89 percent in terms of current dollars. However, the federal share of $1.6 billion in 1968 (73 percent of the total) increased only 73 percent to $2.7 billion (67 percent of the total). Since the federal portion has been on the decline, universities

CHART 5

FEDERAL OBLIGATIONS TO UNIVERSITIES AND COLLEGES BY CATEGORY OF SUPPORT: FY 1964-77



° BASED ON GNP IMPLICIT PRICE DEFLATOR
SOURCE: NATIONAL SCIENCE FOUNDATION

have obviously been forced to pursue outside sources of support. Also, as you can see, the value of the federal R&D dollar in 1977 is about the same as it was in the peak year of 1968. *(Chart 6)*

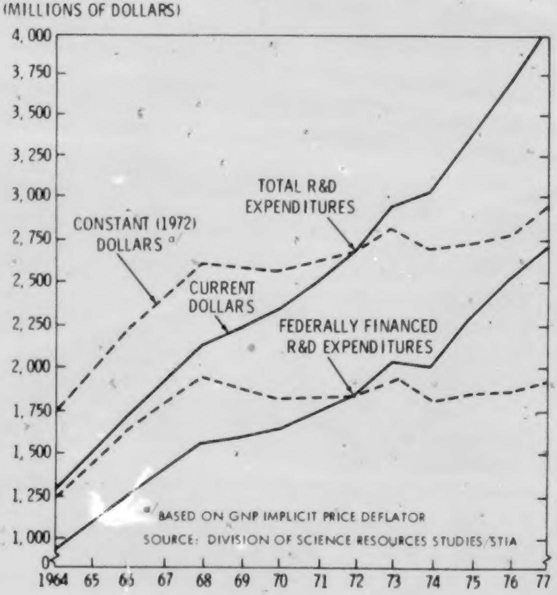
By looking at the character of work performed through the use of these dollars expended for R&D, we observe that for FY 1977, 69 percent went to basic research, 26 percent to applied research and the balance (5 percent) for development. This distribution has remained fairly stable since FY 1973, but when compared to the late sixties and early seventies it is obvious that there has been a slight shift away from basic research.

Funds expended for research and development by universities and colleges are an important indicator of the financial status of higher education. These funds must support graduate students in research as well as those professionals employed by universities in R&D activities. In line with the moderate increases we have just seen on the R&D expenditures side, we should find comparable growth in the enrollment and employment areas. *(Chart 7)*

In fact, the employment survey results show an average annual growth rate of 3.5 percent from 1974 to 1978 for scientists and engineers primarily

CHART 6

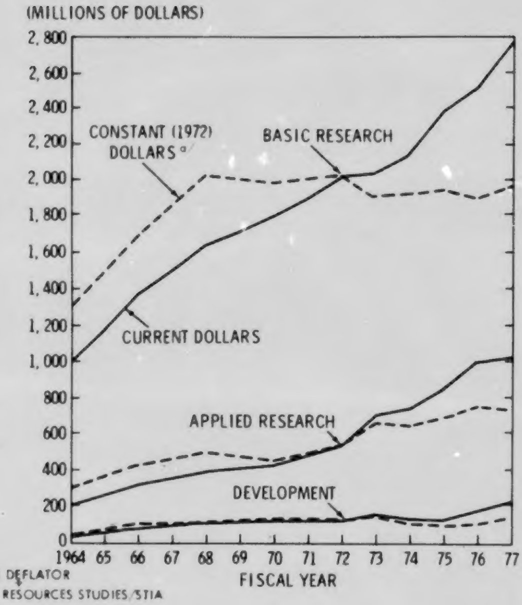
RESEARCH AND DEVELOPMENT EXPENDITURES IN UNIVERSITIES AND COLLEGES: FY 1964-77



ᵃ BASED ON GNP IMPLICIT PRICE DEFLATOR

SOURCE: DIVISION OF SCIENCE RESOURCES STUDIES/STIA

CHART 7



R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES BY CHARACTER OF WORK: FY 1964-77

a/ BASED ON GNP IMPLICIT PRICE DEFLATOR

SOURCE: DIVISION OF SCIENCE RESOURCES STUDIES/STIA

employed in R&D activities, and a 3 percent per year increase for those engaged in teaching.

So, for the past five years, the proportion of scientists and engineers employed in either teaching or R&D as a primary function has remained relatively constant. But, when compared to 1969 where the distribution was 69 percent in teaching, 20 percent in R&D, and 10 percent in other activities, it is obvious that there has been a shift into teaching activities which may begin to reverse. The impact of demographic influences on graduate enrollment that is expected in the 1980's will undoubtedly be reflected in comparable declines in the teaching load and thus a possible shift back toward R&D, if money is available, or it could mean a drop-off in total academic employment. *(Chart 8)*

The most recent picture of graduate enrollment in science programs shows increases at all levels in doctorate-granting institutions. Total enrollment increased 3 percent between fall 1976 and fall 1977 while full- and part-time enrollment rose 2 percent and 6 percent respectively. These increases can be linked to several factors: (1) the continuing increases in

CHART 8

SCIENTISTS AND ENGINEERS EMPLOYED IN UNIVERSITIES AND COLLEGES BY PRIMARY FUNCTION: JANUARY 1969-78

PRIMARY FUNCTION	1969	1971	1973	1974	1975	1976	1977	1978
TOTAL	231, 756	257, 904	264, 900	268, 495	278, 919	288, 155	297, 289	306, 547
TEACHING	160, 781	184, 966	199, 083	206, 745	215, 031	222, 816	228, 729	235, 360
RESEARCH & DEVELOPMENT	47, 118	48, 268	46, 634	47, 386	49, 440	50, 249	52, 316	54, 332
OTHER	23, 857	24, 670	19, 183	14, 364	14, 448	15, 090	16, 244	16, 855

SOURCE NATIONAL SCIENCE FOUNDATION

federal obligations; (2) the 2-percent real growth in academic R&D expenditures; (3) the influx of foreign graduate students; and (4) expanding opportunities for women scientists and engineers in the economy. [The number of women enrolled full time increased 9 percent in 1977, compared to a 1-percent decline in the enrollment of men.]

Concentrating on the R&D aspects of enrollment, we note that the number of students supported through research assistantships has continued to increase over the past four years stimulated by comparable increases in R&D expenditures. As a result, more than half of these RA's are supported by federal sources. *(Chart 9)*

In addition to graduate students involved in research, we must also consider the number of postdoctoral appointments at the institutions which have been increasing since 1974. With the increased competition for a limited number of employment positions in academia, the postdoctoral appointment is becoming more attractive to young investigators as a means of continuing their activities in academic research. Again, the federal government supported nearly 69 percent of the 19,700 postdoctorals at doctorate-granting institutions in 1977. *(Chart 10)*

Looking forward to the fall 1978 survey, which should reach your desks soon after your return from this conference, I'd like to give you a sneak preview of our new "short-form".

CHART 9

FULL-TIME GRADUATE SCIENCE STUDENTS WITH RESEARCH ASSISTANTSHIPS: 1974-77

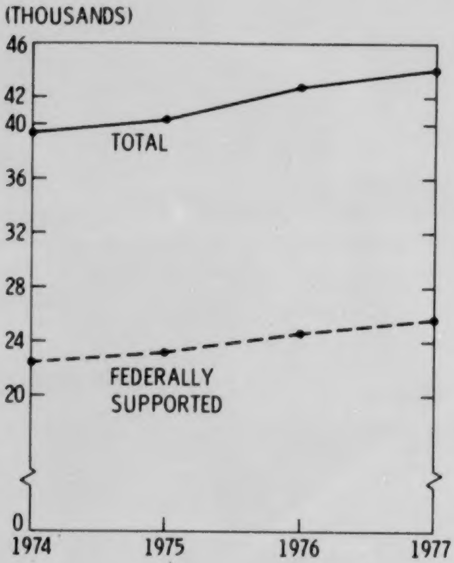


CHART 10

POSTDOCTORALS IN GRADUATE SCIENCE DEPARTMENTS: 1974-77

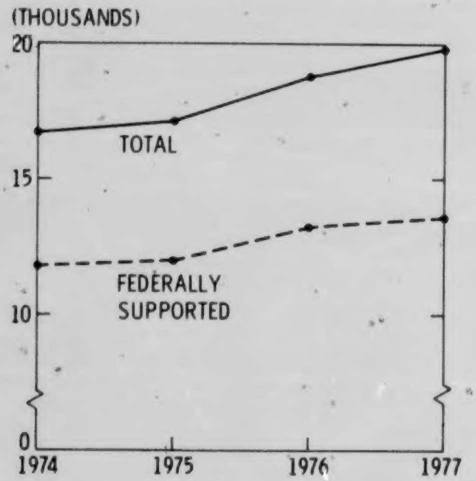


CHART 11

National Science Foundation and National Institutes of Health
Survey of Graduate Science Student Support, Fall 1978
Institutional Data Sheet
(Note: Before Filling Out Form, Please Read Instructions Below)

Institution: 0000000 Any University

		Full-Time Graduate Students									**Part-Time Students**	
		Federal Sources				**Non-Federal Sources**		**Self-Support** (Incl. Loans & Family Support) (G)	**Total** [Sum of (A) Through (g)] (H)	**of the** Total in (H), How Many are First Year (I)	Total (J)	**of the** Total in (J), How Many are First Year (K)
		HEW										
Leave Column Blank	Graduate Science and Engineering Departments	NIH (A)	Other HEW (B)	NSF (C)	Other Federal (D)	Institutional Support (E)	Other Outside Support (F)					

In response to the recent emphasis on reducing the federal paperwork burden at the institution level, NSF will be conducting this short version of the GSSSP on a biennial basis at doctorate-granting institutions only. We will request 11 data items per department, rather than the 120 normally requested in order to continue to keep track of federal support patterns and provide a base for projecting the S/E manpower pool. *(Chart 11)*

In summary, I would like to emphasize the importance of factual information to the common interests of both NSF and universities. One example of this is the NSF practice of converting basic research expenditures to constant dollars in order to measure the impact of inflation, as I showed you earlier. This measurement is used at the highest level of federal policymaking in determining the status of the scientific enterprise—two NSF Directors have briefed two Presidents and made a major impact on their budget proposals that resulted in a $25 million increase in BR funding. In days such as these when the federal budget is under close examination, the impact of such analysis is far greater than a lengthy dialogue with the scientific community. The old days of full funding of higher education based on faith and incremental planning are probably gone forever. Tight money and social pressures for results are political realities of the day. The goals of the NSF statistician and university planners under these conditions are one and the same—to provide a more factual basis for policy analysis, planning, resource allocation, and management.

QUALITY ASSESSMENT IN MASTER'S PROGRAMS

Chairman: Bernard J. Downey, *Villanova University*
Mary Jo Clark, *Educational Testing Service*
Giles T. Brown, *California State University, Fullerton*

Bernard J. Downey

The major purpose of this session is to bring you up to date concerning the proposed development of a new CGS instrument which would be used in the assessment of quality of master's degree programs. There will be three panelists. The first, Dr. Mary Jo Clark will present a brief history of CGS-ETS efforts in assessing quality of graduate programs leading up to the present activity. I will then report on the results of the questionnaire sent to the CGS membership to evaluate potential characteristics of quality programs and indicators which might measure the relative achievement of these characteristics. Finally, Dean Giles Brown will present a first reaction to the questionnaire results.

QUALITY ASSESSMENT IN MASTER'S PROGRAMS: OVERVIEW AND HISTORY

Mary Jo Clark

Each of you has received a copy of our preliminary report on a survey of CGS members concerning the information that is needed for the assessment of master's programs. The survey asked about the importance of including various program characteristics in such assessment, and the appropriateness of several indicators and sources of information about the quality of these program elements. My assignment this morning is to summarize briefly the events that led to the creation of the committee that conducted this survey, and to review the work that led to the particular program assessment procedures that were suggested.

Those of you who have been attending CGS meetings regularly for the past four or five years will recall that at least one session at each of these meetings has been concerned with issues of program review. Three themes seemed to run through these sessions:

1. Reviews of graduate programs need to be multidimensional, going well beyond counting number of degrees granted or comparing reputational ratings, if they are to reflect the complexity and variations of graduate education.
2. Graduate programs should be reviewed in relation to their differing purposes, such as preparing researchers or practicing professionals,

meeting local or national manpower needs, or preparing students for doctor's or master's degrees.

3. Program reviews should lead to the improvement of program quality, rather than focusing entirely on external demands for program accountability.

Although discussions in the graduate community have emphasized these points for some time, there was continuing uncertainty into the early 1970's about the best way to undertake these kinds of program reviews. Searching for answers, the Council in association with ETS obtained a grant from NSF to explore reliable ways to measure important quality characteristics in a limited number of doctor's degree programs. The research was carried out in departments of chemistry, history, and psychology at 25 universities around the country. Most data were collected through questionnaires completed by enrolled doctoral students, faculty members who taught graduate students, and recent graduates of the participating doctoral programs.

The research developed assessment indicators in six areas:

- faculty training and performance
- student ability and experiences
- physical and financial resources available to the program
- judgments about the learning environment
- judgments about the academic offerings and procedures
- accomplishments of recent graduates[1]

The study concentrated on doctoral programs since it was exploratory and therefore needed a fairly specific focus. However, many of the results seemed relevant to master's degree programs as well, and it is these results that I want to summarize this morning.

First, early in the study we had to acknowledge that the concept "quality" is a value judgment, and could not be defined by the research. Instead, the project focused on ways to measure important program characteristics that deans and department heads said were important to know about when making judgments about the academic quality of a graduate program. The resulting information was intended to improve, but not replace, decisions to be made by graduate education administrators and policy makers.

Second, the research focused on information that could be collected in standard ways from many different programs in different disciplines and with different purposes. Therefore, the data collection procedures had to be fairly general—they could not inquire into particular aspects of individual programs, such as their unique purposes, or the traditions of a specific discipline, or details of the curriculum. Not including questions about these aspects of graduate programs does not mean that they were considered unimportant; clearly, it is important to know about these things when reviewing any particular program, but they did not lend themselves to common data collection procedures.

---

[1] For more details see "The Assessment of Quality in Graduate Education: Summary of a Multidimensional Approach" published in October, 1977, by the Council of Graduate Schools.

Third, survey data collected from program participants—faculty members, graduate students, and recent alumni—proved to be not only easy and inexpensive to collect but also quite reliable. That is, analyses based on tabulations of the questionnaires demonstrated a high level of consistency among the responses within programs, variation in the responses to most items across programs, and expected relationships between the results and independent measures of similar aspects of the programs.

Fourth, the resulting program indicators were judged to be most useful within universities and departments, where they could contribute to a better understanding of program strengths and weaknesses and suggest ways of improving educational quality.

To summarize, the study of assessment procedures in doctoral programs gave special attention to the viability and usefulness of indicators of program functioning that could be obtained in common ways directly from program participants, in widely divergent departments. The results of the research were quite encouraging; the experimental data collection procedures could be used to describe programs in ways that were helpful to individual programs and that made reliable distinctions between programs.

The program characteristics and indicators that were listed in the survey being reported today were selected mainly on the basis of evidence from the doctoral-level research that I have just been describing, supplemented by the results of survey of heads of departments concerning the types of information they thought should be collected in departmental self-studies and judgments based on the experiences of members of the Task Force. As in the study of doctoral programs, fairly heavy emphasis was placed on data collected from faculty members, students, and alumni.

Though the characteristics and indicators listed on the survey reflected the committee's best judgment about the assessment of master's programs in general, I am confident that all of the committee members would join me in emphasizing that we see this as only a good starting point in the assessment of the character and quality of any particular master's degree program. As Mike Pelczar said about the assessment of doctoral programs in a similar session at the CGS meeting last year, it is not an "end" but a systematic "beginning" that is suggested here. In particular, the committee was aware that these data need to be considered in relation to several other kinds of information that programs would need to have available for a thorough review—for example, information about program purposes, details of the curriculum and other academic offerings, evidence of the need or demand for the particular program, costs, and so forth. These program characteristics tend to differ by discipline, by geographic location, and according to institutional history or the accidents of established tradition. They can be evaluated objectively, but do not lend themselves to assessment in standard ways in large numbers of departments in different disciplines. This does not mean, however, that they are not important. The survey's primary emphasis on indicators of more general program characteristics simply reflects what appeared to be practical limits on the kinds of useful information that could be collected relatively easily and quickly by almost any department.

With this background, then, Dean Downey will share with us some results from the survey.

PRELIMINARY REPORT OF THE RESULTS OF THE QUESTIONNAIRE ON MASTER'S PROGRAM

Bernard J. Downey

You have in your hands a copy of the preliminary report on the *Survey of Proposed Characteristics, Indicators and Sources* related to the assessment of quality in master's degree programs. The members of CGS Committee appointed to conduct this survey are listed on the first page. As many of you know Dean Sam Webb, a highly respected and popular member of our community and one of the members of the committee, passed away in late August. I would now like to ask for a moment of silence in his memory.

Questionnaires were sent to all member institutions. As of November 15, 1978, 176 had returned questionnaires and of these all but six were useable. Of those who answered the question related to expectations of the usefulness of the final instrument, over 94% indicated some usefulness.

The questionnaire was divided into six sections dealing respectively with (a) faculty, (b) students, (c) resources, (d) learning environment, (e) program and (f) alumni.

Member institutions were asked to rate on a scale of 1 to 4 the characteristics proposed for each of these sections. Separate ratings were requested for traditional academic master's programs on the one hand and professional and technical master's programs on the other. The higher the rating, the more important the characteristic.

Respondees were also asked to rate the appropriateness of both the indicators proposed for each characteristic and also the sources of these indicators. Again the higher the rating, the more appropriate the indicator and/or source. The results are shown on the following pages.

In addition to the ratings, the respondees were requested to add their comments concerning the adequacy or appropriateness of the characteristics and indicators. These comments have been assembled on the following pages.

The committee plans to incorporate all late returns into the final report which will be the basis for the writing of the set of questionnaires to be used in the assessment process.

Preliminary Report
on the
Survey of Proposed Characteristics, Indicators, and Sources Related to the Assessment of Quality in Master's Degree Programs

By

CGS Task Force on Assessment of Quality in Master's Degree Programs

James Ballowe, Bradley University
Giles T. Brown, California State College at Fullerton
Bernard J. Downey, Villanova University
Laurine E. Fitzgerald, University of Wisconsin at Oshkosh
Robert R. Raymo, New York University
Sam C. Webb (deceased), Georgia Institute of Technology

Consultants: Robert Altman, ETS
Mary Jo Clark, ETS

November 15, 1978

RESPONSE

Questionnaires Sent Out 363

Questionnaires Returned
(as of Nov. 15, 1978)
Total 176
Useable 170 (Master's only - or predominantly) - 78
(Research oriented Ph.D.) - 92

Expectations of Usefulness

	No.	*%*	*Adjusted %*
Very Useful	38	22.3	27.3
Useful	70	41.2	50.3
Somewhat useful	23	13.5	16.5
Doubtful or of no use	8	4.7	5.8
Did not answer that question		31	18.2
	170	*100.0*	*100.0*

Information for Program Assessment—Masters Degree Level
Council of Graduate Schools Survey
Preliminary Report—November 1978

A. Faculty

Characteristics	*Rating or Importance of Characteristic*		*Suggested Indicators*	*Source of* Indicators*	*Rating of appropriateness of Indicators & Sources*	
	Academic	*Pro/Tech*			*Academic*	*Pro/Tech*
Quality of instruction	3.84	3.85	Ratings of faculty preparation for courses, useful criticism of student work, use of appropriate teaching methods and evaluation procedures, excitement for new ideas, helpfulness to students	S,A	2.97	3.00
Quality of student	3.39	3.39	Ratings of faculty awareness of student needs and suggestions, concern for the professional development of students, accessibility; quality of academic and career guidance	S,A,F	2.99	3.03
Scholarly and artistic contributions	3.54	3.41	a) number of scholarly or scientific books and journal articles published in the last five years b) number of other creative scholarly works that have been performed, exhibited, or published in the last five years. c) Research activity as indicated by grants, editorships, awards, etc	F	3.35	3.27
Professional activities	2.93	3.30	Self-reported offices held in professional associations; consulting; contributed services; private practice of one's profession (e.g., clinician or CPA)	F	3.22	3.22

Commitment to the program	3.57	3.59	Ratings of involvement in decisionmaking; team efforts; job satisfaction; commitment to the master's degree program	F	2.71	2.76
Training and experience	3.54	3.52	Highest degree; years of teaching experience; rank; tenure	F	3.39	3.32
B. Students						
1. Academic ability	3.63	3.39	Self-reported grades: (a) total undergraduate; (b) major and/or allied undergraduate; (c) graduate	S	2.80	2.80
2. Accomplishments	2.99	3.05	Self-reported publications or presentations, independent research, nonclassroom development of professional skills	S	2.89	2.86
3. Commitment and motivation	3.50	3.37	a) Self-rated pursuit of unassigned reading, enthusiasm for or dedication to the major; professional activities	S	2.75	2.79
			b) Faculty-rated enthusiasm, perseverance, and independence of students	F		
4. Plans after graduation	2.40	2.71	Self-reported plans for further study or employment	S	2.85	2.88
5. Personal characteristics	2.42	2.38	Year of undergraduate degree, sex, enrollment full- or part-time, relevant work experience	S	2.86	2.89
6. Persistence/attrition	3.08	3.08	Percentage of entering students who complete the degree	P	3.30	3.29

*F=Faculty; S=Students; A=Alumni; P=Program Profile

Information for Program Assessment—Masters Degree Level
Council of Graduate Schools Survey
Preliminary Report—November 1978

C. Resources

Characteristics	*Rating or Importance of Characteristic*		*Suggested Indicators*	*Source of* Indicators*	*Rating of appropriateness of Indicators & Sources*	
	Academic	*Pro/Tech*			*Academic*	*Pro/Tech*
1. Facilities & services	3.66	3.62	Ratings of adequacy of library holdings, equipment needed for teaching and research, space, course scheduling; departmental funds; financial aid for students	F,S	3.18	3.24
2. Administrative support	3.42	3.43	Ratings of campus administration and dean's support of the program; university procedures relative to program development; adequacy of support staff	F	2.91	2.89
3. Support services for students	2.84	2.83	Ratings of accessibility of graduate student housing, counseling, financial aid, health care, placement, parking, facilities for intellectual and social interaction	S	2.99	2.96
4. Faculty	3.73	3.62	Percentage of faculty with doctorates; percentage tenured; number of full-time and part-time faculty	P	3.52	3.46
5. Enrollment	2.88	2.89	Number of first-year students; total number of full- and part-time students; number of foreign students	P	3.51	3.49

6. Degrees	3.03	2.87	Highest degree offered; number of master's and doctor's degrees awarded in last five years	P	3.55	3.48
D. Learning Environment						
1. Intellectual environment	3.64	3.41	Ratings of competitiveness among students, atmosphere conducive to rigorous intellectual effort, intellectual excitement, academic demands; opportunity to interact with persons employed in fields related to the degree program	S,F	3.09	3.06
2. Interpersonal environment	3.16	3.14	Ratings of extent to which different personalities and points of view are welcome; team efforts; informal student and faculty interactions; faculty concern for student development; collegiality	S,F	2.96	3.00
3. Morale a. student satisfaction with program	3.31	3.35	Ratings of training as preparation for anticipated career; learning that has taken place; extent to which program delivers what was promised	S	3.11	3.12
b. Faculty satisfaction with employment conditions	3.25	3.19	Ratings of departmental leadership, participation in decision-making, interactions with colleagues	F	3.06	3.05

*F=Faculty; S=Students; A=Alumni; P=Program Profile

Information for Program Assessment—Masters Degree Level
Council of Graduate Schools Survey
Preliminary Report—November 1978

E. Program Contents & Procedures

Characteristics	*Rating or Importance of Characteristic*		*Suggested Indicators*	*Source of* Indicators*	*Rating of appropriateness of Indicators & Sources*	
	Academic	*Pro/Tech*			*Academic*	*Pro/Tech*
1. Program purpose	3.37	3.45	Ratings of relative emphasis on preparing researchers, teachers, or practitioners; personal enrichment; or further study	F,S	3.02	3.06
2. Academic offerings	3.61	3.46	Ratings of opportunities to take courses in other fields, number and quality of non-course activities sponsored by the program, variety and depth of course offerings, flexibility to meet individual student needs, independent study; opportunities for creativity in projects, papers, or research; extent to which course offerings and content reflect clearly stated objectives of the program	S,F,A	3.27	3.28
3. Degree requirements	3.56	3.53	Does the degree require: a) comprehensive or other terminal examination b) thesis or other independent research project c) internship, practicum, or field experience	P	3.57	3.53

4. Assistantship and internship experiences	3.08	3.25	Ratings of assignment, supervision, colleagueship; learning experiences	S,A	3.15	3.23
F. Recent alumni						
1. First job after degree	2.81	3.14	Self-reported employer type, major job responsibilities, relationship to graduate study, whether job was the same as or different from one held prior to receiving the degree	A	3.22	3.30
2. Career development	3.03	3.15	Self-reported current employer type, major job responsibilities, relationship to graduate study, satisfaction with career progression, supervisory responsibilities	A	3.16	3.16
3. Post-degree achievements	3.03	3.04	Self-reported professional publications and presentations, income, noteworthy achievements, further graduate study	A	3.16	3.14
4. Satisfaction with educational training	3.23	3.34	Ratings of extent to which program prepared for employment; personal enrichment; strengths and weakness of program	A	3.22	3.26
5. Time to degree	2.50	2.53	Year started program, year received degree	A	3.08	3.14

*F=Faculty; S=Students; A=Alumni; P=Program Profile

MASTER'S ONLY INSTITUTIONS

General Comments

Data obtained via questionnaire should be supplemented with information obtained via interviews - 4

Questionnaires to students should allow latter to express their assessment of the worth of an activity in relation to their own goals.

Alumni questionnaires may be difficult to get back, but they are important.

Look at all indicators to make certain justice is being done to prof. and tech. degree programs.

Include contributions and activity of adjunct faculty and cooperating professionals. 2

Include accrediting reports on learning environment and resources.

Objective sources of information should be included in all areas.

Specific Comments

A Information must be provided via department or college dean. Higher administrative offices should be able to provide much of this information leaving to the questionnaires only value judgments - 2 Indicators good but sources for indicators weak.

(Pro/Tech) - Assess knowledge of current practice in field through regular interaction with practitioners

Systematic faculty profile needed - will answer all of A(1-6)

A-1	Include evaluations by chairperson
A-1	Evaluation by peer visitation should be included - 2
A-1	Add informal interaction with students in scholarly/professional context
A-1	Measure degree to which students can communicate technical, conceptual aspects of field
A-1	Add professional consulting
A-2	Graduate Office should be asked
A-2	Include in student questionnaire
A-3	The quality of these should be evaluated

A-3	Role of faculty as mentor in professional areas should be measured
A-3	Include applied research activities
A-5	Graduate office and chairpersons should be asked
A-5	Include in student questionnaire - 2
A-5	Should bring out faculty commitment to master's program as opposed to both undergraduate program and doctoral program
A-6	Official university records should be included - 2
A-6	Teaching experience re-types of courses taught
A-6	Experience in thesis direction
A-6	Experience in committee work
A-6	Include data on institutions from which degrees were received - 2
A-6	Include (for prof. programs) professional experience in the field

B	Students records better source of info than student questionnaire - 2 Something should be added which measures intellectual and creative capacity (differs from academic ability) Add something to measure competency in basic skills Need for administrative input

B-1	Include GRE, etc. - 3
B-1	Student records best source
B-2	Add career accomplishments
B-4	Include enhancement of job expectations on part of working part-time students
B-5	Personal interviews also needed

C	Resources - difficulty relating characteristics to resources Need for administrative input Identify whether all resources equally available particularly to graduate students

C-1	Needs more objective measures - 2
C-1	Obtain data from division concerned, i.e., library, financial aid office, etc. - 2
C-1	Be more specific - refer also to computer facilities, labs, carrels, etc.

C–2	Regional accreditation statement - 2
C–2	Information should be obtained directly from administrators - 2
C–2	Regional accreditation statements
C–2	Needs more objective measures
C–3	Include appropriateness of support services
C–3	Graduate dean should have input
C–3	Obtain data from division concerned, i.e., library, financial aid office, etc.
C–4	Add measure of years of professional experience on part of faculty
D	Need for administrative input
D–3	May be difficult to determine long-range student satisfaction (except via alumni)
D–3a	Alumni questionnaire better than student questionnaire - 3
E	Something should be added which measures student research activity
	Include admission procedures and decisions somewhere
	Include admission data somewhere
	Need for administrative input
E–1	Assess clarity of program's stated purposes and relationship of latter to program emphases
E–1	There should be somewhere an explicit statement of objectives against which questionnaire results might be measured
E–2	Alumni response best source of info
E–2	Attempt to relate offerings to students' goals
E–2	Add something to identify level of courses, i.e., mixed undergraduate-graduate, all graduate or what?
E–3	Need student and alumni comments on quality of requirements
E–4	Ratings from supervisors
E–4	Interviews with assistants and interns should be made
F	Need for administrative input

F-1	University placement office and alumni office may be helpful here
F-1	Use an employer questionnaire
F-1	Appropriateness of first job relative to academic training - 2
F-2	University placement office and alumni office may be helpful here - 2

Research Oriented Doctoral Institutions

A	Profile of each faculty member should be provided - 2
	An output measure - number of master's degrees per year per faculty member
	Student questionnaires may be unreliable
	Graduate dean's and chairmen's ratings should be included somewhere
	Evaluate faculty attitude towards Master's programs as compared with doctoral programs - 2
	Peer evaluation should be sought - 6
	Measure faculty productivity (theses directed, committees served on, etc.)
	Peer evaluation of quality of professional practice (Pro/Tech) should be sought
	Include measure of faculty involvement in curriculum development

A-1	Add faculty questionnaire
A-1	Include evaluation of syllabus, course materials, teaching effectiveness - 2
A-2	Measure faculty knowledge of university and program regulations and willingness to share these with students
A-2	Evaluate students' sense of responsibility to seek advisement
A-2	Evaluate through progress of students through program, incidence of "drop and add," peer evaluation
A-3	Include report from research office
A-3	Make careful analysis of artistic productions
A-3	Include invited lectures delivered and papers presented at national or regional meetings - 2
A-3	Make period ten years
A-3	Faculty profile should be used
A-4	Include professional experience, particularly in Pro/Tech areas
A-5	Interview faculty in given program - 2
A-5	Departmental information should also be sought - 2

A–5 Student and alumni judgments should be added - 5
A–6 Add non-academic professional experience and training - 3
A–6 Obtain data from university records

B Evaluation of pace of student progress
Student attitude evaluation of worth of program should be assessed
Graduate School records
1. Fraction of applicants admitted
2. Fraction of admitted who enroll
3. Average time for completion of degree

B–1 Obtain data from university records - 14
B–1 GRE scores, etc., fellowships should be included - 13
B–1 Include name of undergraduate school
B–1 Include faculty evaluation of students
B–2 Include work experience where appropriate
B–2 Include faculty questionnaire - 2
B–2 Student records best source
B–2 Change of field from undergraduate major may undervalue student accomplishments
B–2 Undergraduate major in relation to graduate major
B–3 Include faculty evaluation
B–3 Interview student groups
B–3 Evaluate motivation for returning to school from work
B–4 Interview student groups
B–4 Find long term career plans
B–5 University records should provide data - 2
B–5 (Pro/Tech) use only work experience
B–5 Should be obtained first hand by interview
B–6 Care - regarding part-time students - 2
B–6 University records should provide data
B–6 Identify reasons for student drop out - 3
B–6 Student and alumni interviews would be helpful

C Quality control mechanisms should be evaluated
Include assessment of *use* of resources
Outside review needed
Outside reviewers certainly needed - 2
Indicators okay, sources questionable - 2

	University sources should provide information
	Entire area should be related to need of a program

C–1	Librarian questionnaire might be useful - 3
C–1	Outside review needed - 2
C–1	Add administrative questionnaire
C–1	Include clinical facilities (where appropriate)
C–1	Obtain data from university records - 4
C–1	Include computer services
C–2	Departmental records good source
C–2	Outside review needed - 2
C–2	Administration should be interviewed
C–3	Program profile good source
C–3	Separate financial aid from other services
C–3	Support services should be clearly distinguished from one another
C–3	Include assistantship stipends
C–3	Include residence for married students
C–4	Need faculty to be included in resources?
C–4	Identify sources of faculty degrees - 2
C–4	Include data on support for faculty travel, for research, etc.
C–5	Include student/faculty ratio (per full-time equivalency faculty)
C–5	Enrollment trends more important than current enrollment

D	Identify somewhere percentage of foreign students
	Report on percentage of foreign students who return home after graduation
	Evaluate institutional attitude towards graduate programs (faculty questionnaire)
	Outside review needed

D–1	Physical environment should be included somewhere
D–2	Use interview with student groups
D–2	Include in alumni questionnaire
D–3a	Use interviews with student groups
D–3a	Use alumni questionnaire - 4
D–3b	Include degree of satisfaction with salary, fringe benefits, etc.

E	Include assessment of techniques and procedures for evaluation of student achievement
	Include nature of student research projects
	Include process and report of external accreditation
	Program profile best source of information

E-1	Include administrator's assessment
E-1	Include Assessment of fidelity to purpose - 2
E-1	Alumni response should be included - 4
E-1	Program profile good source
E-1	A clear statement of goals is required somewhere - 4
E-2	Departmental records good source
E-2	Evaluate adequacy of offerings in department
E-2	Include administrator's assessment
E-2	Include internship opportunities (Pro/Tech)
E-2	Require submission of course outlines
E-2	Require submission of written guidelines for independent study
E-2	Require submission of course selection by students
E-3	Assessment of exceptions made to degree requirements
E-3	Evaluate introduction to methodology of the discipline
E-3	Include student questionnaire
E-4	Include in faculty affairs the evaluation of internships
E-4	Include faculty questionnaire - 3
E-4	Add alumni questionnaire

F	Institutional records should be used - 2
	Very important part of evaluation!
	Evaluate faculty efforts in student placement

F-1	Is job in field or degree?
F-2	Employer questionnaire should be used - 2
F-4	Employer questionnaire should be used
F-5	Obtain data from University records - 3

IN SEARCH OF QUALITY FOR THE MASTER'S DEGREE

Giles T. Brown

How are judgments concerning quality made? I am often perplexed and somewhat saddened by the apparent practice of many humans—even graduate deans—to come to such conclusions on slender evidence. A brief conversation (possibly at a professional meeting!), a chance encounter with a student (who may or may not be representative!), or a glance at a report (which itself may only have the dignity of the printed word to add to its authenticity!) may be the building blocks which are used to form conclusions. And these conclusions oftentimes transform themselves into dogmas. This project to develop ways of measuring quality by using a multidimensional approach, therefore, is attractive and vital.

It is not my intention to review the comments which have already been distributed to you. You can read them more efficiently than they can be given orally. But I would like to share with you some personal thoughts based upon my experience both as a member of the committee and as a graduate dean for the past eleven years of a master's-only institution. Fullerton, incidentally, is a public institution with thirty-seven degree programs, has a graduate enrollment of around 3200, most of them part-time, and has awarded about thirty-seven hundred master's degrees during the last five years. It is a relatively young institution having been started in 1959. In these post-Jarvis days, and if you have been reading the California papers, its future is somewhat uncertain—as one wag observed, its future bears a disconcerting resemblance to a Las Vegas player before a roulette wheel.

Here, therefore, are a few personal comments on the survey which have been selected from many that could be given.

Even though I have played a part in its creation, the potential size of the surveys somewhat overwhelms—even intimidates! If volume alone can help us reach quality, we are happily on our way. Any thoughts on how this size can be reduced without losing effectiveness would be welcome by at least one member of the committee. The six major areas seem basic but even these should not be considered sacred.

The high dependence on written surveys and self-studies causes some concern. The reliability of questionnaires and self-reports certainly can be questioned—and was by several of you. Alternatives are not so easily identified. Could exit interviews by used effectively?

The relationship between this type of assessment and the similar activities conducted by regional and national accrediting agencies poses the haunting question whether the effort is duplicative and unnecessary. Possibly an answer to this problem lies in the question—what is the intent of the evaluation? To help improve existing programs? To help make decisions on such critical issues as budgetary support? To impress someone with our excellence or diligence? Obviously frankness would indicate that a combination of factors are present with the improvement of programs ranking high. Even though other agencies may be involved in similar activities, it seems appropriate that graduate deans be active and take a leadership role in this endeavor.

In the constantly changing environment in which graduate education exists, the rise of certain kinds of institutions adds a complication which may make efforts to improve the quality of our programs appear to be self-defeating. To describe themselves, these institutions and businesses use such terms as innovative and nontraditional. They tend to minimize group instruction, seminars, library facilities, and laboratories, and substitute the "recognition of prior learning" for a fee. Apparently California is a particularly fertile field for these business ventures. In my own university's service area there now is a California Western University which borrowed a name from an unrelated but a regionally accredited institution of a few years ago. Even my home town of Newport Beach has a Newport International University which recently announced that it was ready for business at the master's level. Some of these ventures have organized a "National Association of Schools and Colleges" to provide "accreditation" for themselves. I would be less than candid not to admit the presence of the fleeting thought that the time and effort spent in plans to enhance quality might better be spent in recruiting students so that we may compete with the ads in the *Los Angeles Times* and elsewhere on how easy it is to obtain a degree. Some of these ads boldly declared that degrees can be earned with no classwork required. Last year our University received a letter from a chief of a state division of an eastern state which simply asked: "Could you kindly tell me if you have a program for the winning of a master's degree in humanities entirely through correspondence courses?" This project we are considering today brings reassurance that quality, at least in some ways, can be identified and that indicators of quality can be measured. It is hoped that laypersons who, at present, are all too quick to accept evaluations of institutions and programs based on opinions will soon accept assessments which are more firmly and widely supported.

Part-time students undoubtedly represent a much larger portion of students in master's degree programs than doctoral. This poses some unique problems and challenges for the assessment of quality. For some students, there may be a rather long time span between the award of the baccalaureate and their entry into graduate work. Is this fact recognized in any way by the modes of instruction used, by opportunity for updating previous knowledge, by reentry clinics or by encouraging them to experiment to determine which program is most appropriate considering their background and talents? Since many part-time students already have a position in business or profession, success cannot always be measured in "job placement." Appropriate questions might include: has the person become better prepared to assume the current responsibilities assigned, is the graduate now in an improved position to be considered for more satisfaction to the individual on a personal basis even though responsibilities and remuneration remain the same?

The time required to complete a master's degree seems significant to me in assessing quality. This factor measures in some ways the intensity of the experience and the currentness of the information although it is recognized that the rate of change varies with the discipline.

The role played by part-time or adjunct faculty, particularly in professional programs, may not be adequately represented in the survey. Suggestions on how to recognize their important contributions in improving the quality of the degree work would be welcome.

Before giving you an opportunity to help us in refining and selecting the best tools for assessing quality, one final observation might be selected from among others which could be given. The measurement of the "intellectual environment" causes concern. Some feel that this characteristic is impossible to measure and still others are not even certain that the subject is relevant. I strongly support the concept that this characteristic is significant but admit its measurement is difficult. I share the doubts whether "competitiveness among students" should play a major role in determining that environment.

In closing let me say that I am delighted to see the Council of Graduate Schools recognize the need for this study and I want to express my admiration to Bernard Downey for his effective leadership as chairman and to the committee members for their work, diligence, and perceptions concerning this challenging and difficult subject. Yesterday, Chancellor William D. McElroy of the University of California—San Diego urged the strengthening and revitalizing of the master's degree. This is one avenue. It merits our support and good wishes. May I also thank you, as well as those of our colleagues who are not present, who not only returned the questionnaires but made comments.

Concurrent Special Interest Sessions

Friday, December 1, 1978, 10:15 a.m.-11:45 a.m.

IMPLICATIONS OF THE BAKKE CASE FOR GRADUATE ADMISSIONS

Chairman: Andrew J. Hein, *University of Minnesota*
Frank W. Hale, Jr., *The Ohio State University*
Allen G. Marr, *University of California, Davis*

Andrew J. Hein

The *Bakke* case, probably second only in impact to that of Brown versus the Board of Education so far as the educational community is concerned, undoubtedly received the widest media coverage of any Supreme Court decision in history. When the judgement of the Court was announced—much later than many speculators had predicted—the coverage continued and in my judgement suffered as did the predecision publicity, from overly simplistic views of what it was the Court considered and then what it was the Court said.

What concerns me now is the effect of the *Bakke* publicity with respect to affirmative action programs generally and with regard to the minority clientele in which we retain a strong and very serious interest in particular. As regards affirmative action generally, I agree with that group which sees the Court's decision as not interfering with the guidelines which the committed have followed since the late 60's to the present. A subset, and a relatively small subset which includes me, views the Court's judgement as enhancing the possibilities for affirmative action. Admittedly there are guidelines to be followed and legal admonitions to be dealt with. We had these pre-*Bakke*; we continue to have them post-*Bakke* but we have some clarification as a result of the *Bakke* decision. My cautious optimism will, I hope, be clarified as I move ahead. Meeting the first concern (affirmative action generally), is a matter of educating the academic administrators and faculties in the relevant details of the Court's judgement. There have been many symposia, seminars, workshops and conferences devoted to the *Bakke* decision. Professional meetings such as our own are making space available on their programs for discussion of this very important and timely issue.

The second concern is one which is not as easily addressed. Bakke is a white male. The Supreme Court has ordered Bakke admitted to the medical school at the University of California-Davis. Something was not right with the Davis affirmative action program; therefore, a conclusion easily drawn is affirmative action has seen its day and will now wither if not die. If the minority community draws this conclusion and recruitment efforts are curtailed because of financial stringencies, attempts to expand minority activities in our schools at all levels will be seriously curtailed with no conscious decision for such curtailment. A more unfortunate consequence is difficult to imagine.

The facts of the case are that Allan Bakke who is a white male applied to the Medical School at the University of California-Davis in both 1973 and 1974 and was rejected. In both these years Davis had set aside 16 of its 100 admissions slots for "disadvantaged" applicants. Two separate committees were involved in the admissions procedure, one for the regular applicants for the 84 vacancies and another for the 16 special program slots. Although many majority applicants applied for the 16 vacancies as "disadvantaged", the facts are such that these vacancies were filled only with minority applicants. Minority applicants could compete for the 84 positions as well. The data available show that some minority group members were successful in the larger competition.

Following the second rejection Bakke brought suit in the Superior Court of California and the trial court declared that the University could not take race into account in making admissions decisions and held that the program violated the Federal Constitution, the State Constitution, and Title VI of the Civil Rights Act. The Court did not order Bakke admitted, however, holding that he had not proved that he would have been admitted except for the existence of the special program. Both parties of the suit appealed the decision to the Supreme Court of the State of California. This court upheld the lower court as regards the use of race as a criterion in the admissions procedure (that it was not a permissible criterion) but indicated that the burden of proof as to whether Bakke would not have been admitted except for the special admissions program rested on the University of California-Davis rather than Bakke. Davis conceded that it could not carry that burden and as a result, the California Supreme Court ordered Bakke's admission. The University of California then appealed to the Supreme Court.

In a very real sense there was no opinion of the Court. Six opinions resulted: one by Justice Powell, one by Justices Brennan, White, Marshall and Blackmun with separate opinions by each of the latter three, and one by Justice Stevens in which the Chief Justice and Justices Stewart and Rehnquist joined. To understand the essentials, the opinions of Justices Powell, Brennan and Stevens must be looked at in some detail.

The Stevens group saw the case as posing a single question to which they were to respond and that question was whether Allan Bakke should have been admitted. The Stevens group did not address any constitutional issues and viewed Justice Powell's discussion of whether race could ever be used as an admission criterion as inappropriate. The judgement, this group argued, should rest solely on Bakke's claim to admission under the Davis scheme. The conclusion: since the University of California was receiving federal financial assistance, Bakke was entitled to be admitted because of the applicability of the provision of Title VI of the Civil Rights Act which states that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."

The Brennan group determined that race sensitive admission programs would be permissible under both Title VI of the Civil Rights Act and the Equal Protection Clause of the 14th Amendment of the United States Constitution if:

1. "the purpose of such programs is to remove the disparate racial impact its action might otherwise have and if there is no reason to believe that the disparate impact is itself the product of past discrimination whether its own or that of society at large"
2. that race as a criterion be "reasonably used in light of the program's objectives"
3. that race as a criterion not be used in a way that "stigmatizes any discrete group or individual."

(Quotations are from the opinion written by Mr. Justice Brennan.)

The Powell opinion is probably the most often cited and it is in this opinion that the judgement of the Court is reported but it should be noted that Powell holds but one of the nine votes on the Court. Powell sees the Davis plan as faulty since it excluded non-minority applicants for consideration for a specific number of seats in the entering class. In this judgement the Stevens group concurred with Justice Powell to hold that Bakke was entitled to admission. Powell decided that a school may use race as a factor in making its admissions decisions *from among the entire pool of applicants* provided race was *one of a number* of diversifying factors judged to be important to ensure a "robust exchange of ideas" and he saw diversity as promoting such an exchange. In seeing race as a permissible variable in the admissions decision, he concurred with the Brennan group.

Powell maintained that the use of racial criteria must be "precisely tailored to serve a compelling government interest." He reviewed the four objectives that were asserted by Davis to justify the use of race in its program and then reacted to each. The first was a goal to reduce "the historic deficit of traditionally disfavored minorities in the medical schools and the medical profession." He (Powell) dismissed this first objective very quickly in three sentences: "If the petitioner's purpose is to assure within its student body some specified percentage of a particular group merely because of its race or ethnic origin, such a preferential purpose must be rejected not as insubstantial but as facially invalid. Preferring members of any one group for no reason other than race or ethnic origin is discrimination for its own sake. This the Constitution forbids." The second objective was that of "countering the effects of societal discrimination." While he indicated that the state has a "legitimate and substantial interest" in such activity, he did not see the Board of Regents of the University of California as being in a position to make the findings to underwrite this objective. This function he reserved for proper judicial, legislative or administrative bodies charged with making such determinations. Thirdly, there was a desire to increase "the number of physicians who would practice in communities currently underserved." Justice Powell found no data to demonstrate that members of minority groups themselves would necessarily practice the art in response to needs in the communities currently underserved. The fourth was directed toward "obtaining the educational benefits that flow from an ethnically diverse student body." It is on this point that Powell rested his opinion in *Bakke* to support a race sensitive admissions system. I find it interesting to note that the approval of race sensitivity in the Powell opinion rests on the contribution of the diversity to all students in the educational enterprise.

It almost seems accidental that it might also be contributing to the solution of a societal problem of major importance and dimension. The flaw which he found in the Davis plan was the reliance of the special admissions program solely on ethnic diversity.

Note that the majority vote of five is therefore arrived at in both cases by Justice Powell's opinion, but in each case relies on four different Justices.

Justice Powell described the kind of admission program that would meet his concept of diversity in which race plays a part as follows:

> "In such an admissions program, race or ethnic background may be deemed a 'plus' in a particular applicant's file, yet it does not insulate the individual from comparison with all other candidates for the available seats. The file of a particular black applicant may be examined for his potential contribution to diversity without the factor of race being decisive when compared, for example, with that of an applicant identified as an Italian-American if the latter is thought to exhibit qualities more likely to promote beneficial educational pluralism. Such qualities could include exceptional personal talents, unique work or service experience, leadership potential, maturity, demonstrated compassion, a history of overcoming disadvantage, ability to communicate with the

poor, or other qualifications deemed important. In short, an admissions program operated in this way is flexible enough to consider all pertinent elements of diversity in light of the particular qualifications of each applicant, and to place them on the same footing for consideration, although not necessarily according them the same weight. Indeed, the weight attributed to a particular quality may vary from year to year depending upon the 'mix' both of the student body and the applicants for the incoming class."

He found support for his position in first amendment values embodied in the concept of academic freedom. Justice Powell ascribed to academia a great deal of good sense and judgement.

One can safely conclude that more questions remain unanswered than are answered by the Court's judgement. An important practical consequence I believe is that we should do a complete and careful review of our own admissions criteria and procedures in order to be sure that they are in conformity with *Bakke*.

Following from the Powell opinion, it appears that one's affirmative action stance must be an integral part of the overall admissions system. A fixed quota system is unacceptable although even the Justices recognize a semantic difficulty. We must devise a procedure for fully documenting the decisions which we make. Such documentation will be crucial in the event of challenge. Unfortunately this suggestion comes at a time when restricted budgets make it difficult to expand the admissions function into what potentially could be a most valuable research area. The opinions rely heavily on determination of judgements about and remedies for societal discrimination by appropriate judicial, legislative and administrative bodies and yet give few if any clues as to the identification of such bodies. Obviously the Congress and federal agencies appear to fall within those acceptable to Justice Powell. For many of us, particularly state institutions, it would be helpful to know if state legislatures would be acceptable for making such determinations. What is the status of Boards of Regents who share in the legislative powers in the administration of state supported academic institutions?

Since the Court's judgement about acceptable race sensitive admission schemes rely heavily on diversity in the student body, what are the limits of acceptable diversity?

We should recognize too the great faith which Justice Powell places in the good judgement of academics and the support provided us by his reference to the academic freedom values implied in the First Amendment.

Financial assistance is quite often inseparable from the recruitment and admissions function. Even if you are able to identify and admit minority students, it is not unusual for the admission to result in matriculation only if financial assistance is available. The affirmative action programs of many academic institutions take account of this fact and it is not uncommon for the competition for some monies to be closed except to minority applicants. One sees a very close parallel between the Davis plan for admission and such a system for the awarding of financial assistance. *Bakke* does not address itself in any way to the financial aid question but if the financial aid consideration is viewed on a continuum with recruitment, admission, and retention, could a closed competition be justified as the only means of achieving the diversity in the student body which was the plan at the very point of admission, or earlier still in the recruitment phase? This is an unanswered question. Could an appropriate judicial, legislative, or administrative unit make a judgement to set aside funds for a closed competition? In my estimation, the matter of financial assistance for minorities may prove a more troublesome area as we move ahead than will the admissions related issues.

Recognizing the split in the Court and the multiplicity of opinions it is necessary to study at least those of Powell, Brennan and Stevens for other possible clues in building an affirmative action program for racial and ethnic minorities.

The challenge is to examine our resources and the needs of ethnic and racial minorities which we wish to reach out to and determine how their needs can be met by a system of admissions making use of appropriate criteria and procedures consistent with the content of *Bakke*. Law is the product of an evolutionary process. Additional problems will arise. The person who believes he or she was unjustly treated will seek recourse in the courts; the courts will hand down decisions which will further clarify the law with regard to our ethnic and racial minorities. What we must guard against is *not* moving forward because of fear of legal action. I am sure that each one of us in this room recognizes that only by additional cases in the courts will these issues be clarified. I am sure, too, that we all hope it is someone else who contributes to the building of the interpretations. I share this feeling with each of you. There is nothing wrong with harboring these fears. What would be wrong, I believe, would be the failure to act because of that fear.

THE AFTERMATH OF BAKKE: WHERE DO WE GO FROM HERE?

Frank W. Hale, Jr.

The United States Civil Rights Commission in its recent report (June, 1978), "Toward Equal Educational Opportunity: Affirmative Admissions

Programs at Law and Medical Schools", documented the deterrent effort of traditional college admissions programs with respect to minority admissions and the salutary effect of affirmative action programs which were responsible for increasing minority enrollment in law and medical schools by as much as 300 percent over the past eight years. Between 1969 and 1977, minority enrollment in law schools advanced from 2,933 to 9,597. Over the same period, the number of minorities in medical schools grew from 1,630 to 4,880. The report applauded this program as "among the significant and gratifying civil rights initiatives undertaken in the history of our society."

Similarly, significant gains since the late sixties have been made in the enrollment of minorities into the nation's graduate schools. It must be remembered, however, that whatever the limited success of the past decade, few major institutions have minority graduate enrollment in excess of five or six percent, and even these percentages must be viewed most dimly when considering the presence of significant numbers of minorities in education, and in the humanities and social sciences. The fact is that the physical sciences, health sciences and engineering fields are still largely the preserves of white Americans and to a lesser, but increasing degree, of international students.

The *Bakke* decision has created a great deal of speculation that the Supreme Court's ruling will generate a wave of litigation over affirmative action in the lower courts, given the ambiguities of the decision and the social and political sensitivities of our society. Some, in optimism, have called the ruling "a great gain for affirmative action". Others believe that the Court provided a compromise settlement on the *Bakke* claim, but not much else. And still others proclaim that the decision threatens to dissipate some of the minority educational gains of the last decade. The future now stands as a neutral witness, ready to record whether the overall impact of the Court's response will tend to promote or erode the progress made in affirmative action programs.

Harold Howe, II has reminded us that "it is easy to miss the point that the Supreme Court's *Bakke* decision doesn't require affirmative action in admissions—it merely allows it. The Court's support for the issue of race as a permissible criterion in university admissions is no guarantee to minority persons that they will receive any consideration in competition with whites." In fact, while Justice Powell's opinion allows for some consideration of race as a factor for promoting diversity, the Joint Committee of the American Council on Education and the Association of American Law Schools indicated that "his approval contains no judicial direction on what ethnic groups might be targeted for race, unlike the Brennan approval, which apparently would limit preferences to groups that had been the victims of past discrimination."

Fellow educators, this is a serious departure from a posture that argues for a system that is *open, equitable,* and not contrived to eliminate minorities through the misuse of procedures, tests, and questionable indicators that bear little relationship to the prospective student's performance in school or in his profession upon the completion of school.

We must straighten our backs and meet the Court's decision head-on. It is a moral posture that transcends political and legal considerations. The narrow decision of the Court should alert us to the fact that a change in the Court's composition might very well alter the Court's position at any time, and in the meantime, we have an obligation to both instruct and influence parents, voters, legislators, regents, taxpayers—but first of all, ourselves—pursuing a stance that argues for the spiritual and social vitality of this nation in decades to come.

The University of California at Davis presented a weak case in the first place. It failed to describe the purpose of its special admissions program. It made no case for the need for minority doctors in California's minority communities. It made no mention of the special admissions consideration given to the children of wealthy contributors, alumni, and political supporters of the University. It failed to reveal the institution's record of past discrimination.

Relative to Bakke himself, it appears that the Court gave little attention to these facts:

> That he was rejected by 12 other medical schools where it was clear that he was not crowded out by minority candidates.
>
> That he was 10 or 11 years older than the typical medical school freshman, with the prospect of practicing less than 30 years, while the average graduating physician has the prospective of 40 years.
>
> That 36 whites had lower undergraduate grades than his, but the Court did not explain why it was permissible to accept lower ranking whites but not lower ranking minority applicants.

The critical point is that the Court's decision was that Bakke had higher undergraduate grades, higher MCAT scores, and higher benchmark ratings from Davis which "proved" to the Court that he was better qualified as a potential physician than the 16 minority applicants with lower grades and scores. Enlightened educators are aware that qualifying test scores and undergraduate grades alone do not correlate well with performance in graduate and professional schools, or with success after graduation. The highest correlative factor measured for the MCAT was at Harvard Medical School. It was predictive of later success only 22 percent of the time. Rodney Hartnett's and Benjamin Payton's Ford Foundation Report, *Minority Admissions and Performance in Graduate Study,* indicates that many of the successful minority students (Ford and Danforth fellows) would never have gotten the chance to prove themselves if they had been considered for admission to graduate school only on the basis of test scores or undergraduate grades. The MCAT, LSAT, GRE and other similar qualifying examinations do not test perseverance, attention to details, or other attributes and skills useful in successful people-to-people relationships. Boyd's study again indicated that several hundred students, recruited in the "a better chance" program by highly selective independent Ivy League colleges—did far better than their scores would have indicated. One factor which the *Bakke* decision overlooked is that these minority students, whose SAT scores averaged 200 points below those of white students, succeded in spite of their scores. Seventy percent successfully graduated, seven percent remain enrolled, and twenty-three percent are no longer pursuing a degree. Many graduated with honors, though the SAT scores for some were as low as 300 to 400 points below the median for their college. Graduation and future success is what really counts in the end, and the inability to predict it with so-called objective devices only, like SAT, MCAT, LSAT, GRE and GMAT, make graduate school admission subjective, the products of "hunch and judgement" on the part of those who sit in the seat of judgement.

Just as the authority of government, with the assistance of the Supreme Court, gradually stripped away the civil rights of Negroes during the reconstruction, the Court once again has chosen to ignore the realities of the distinctions that exist between the two races. It is incontrovertible that the position of blacks and other minorities in America today is the "inevitable consequence of centuries of unequal treatment."

Now I am certain that the Burger Supreme Court did not have to strain in making its decision in view of the ever-increasing parade of neo-conservative proponents in this country who have advocated pseudo-meritocracy, retrenchment and the abandonment of the social policies that improve the lot of minorities and the poor. These proponents have been largely successful in creating a national climate that holds that the poor are largely responsible for their own condition, that the Great Society era of the 1960's was a failure (Nathan Glazer, Daniel P. Moynihan) because governmental intervention makes no substantial difference and is an unnecessary waste, that qualifying tests of one kind or another demonstrate that blacks and other minorities are genetically inferior (Arthur Jensen, Richard Hearnstein and William Shockley), and that affirmative action programs promote "reverse discrimination" and "preferential treatment", both of which are un-American and undemocratic.

Obviously, it will take more than a "fence-straddling" posture to combat these monumental inaccuracies.

First, we need to deal with some *impressive*, but devastating statistics:

There are 385,000 attorneys in this country, and even a modest goal of 10% would provide the black community with 38,500 attorneys and the overall minority community with 57,000 attorneys. The fact is that there are fewer than 10,000 black attorneys (less than 3% of all the attorneys) in this country.

There are 325,000 practicing physicians in America. In terms of equity, we should expect that blacks, for example, should comprise at least 32,500 or 10% of that total, but the figure is closer to 8,500 or 2.5%.

There are 110,000 practicing dentists, and blacks comprise a slight 2,700, or 2.7% of this total.

Figures are even more alarming in such fields as veterinary medicine, optometry, chemistry, engineering, architecture, etc.

Now anyone who wants to define *equity* and *parity* in terms of minority representation in colleges and universities, however great the gains made have been over the past decade between 1968 and 1978, does violence to the concept of equal educational opportunity. *There is no way that ten years of affirmative action can offset 350 years of racial segregation and discrimination.*

Blacks, like no other minority, were singled out through history to bear a burden that no other minority has endured. It was the Constitution that mandated that blacks had no right to an education, that they had no right to vote, nor to be active participants in the American process. If other minorities or whites are disadvantaged, the Constitution did not make them so. And it is for this reason that there are those who claim that special or preferential considerations are due in this era of our history until such time as the past inequities in our system can be sufficiently neutralized to the point where blacks and other minorities, as a group, can collectively start at the same point in competition for the goods and services which this nation of bountiful resources has to offer.

National studies indicate that the social concepts and policies of the Kennedy-Johnson years had a significant positive effect on minority progress, despite conservative propaganda to the contrary, during the 60's and 70's. The proportion of black families, for instance, earning over $15,000 annually grew from 9% in 1964 to 19% in 1974. In 1964, about 50% of black Americans lived below the poverty level; by 1974 the proportion had dropped to 31.4%. Since the passage of the Voting Rights Act, the number of black elected officials has increased from 1,860 to 3,503. Of 135 black mayors, 11 were elected in large metropolitan cities.

From 1965 until 1976, black college enrollment nearly quadrupled, from 274,000 to 1,062,000. Blacks who were 4.8% of all college students in 1965, were 10.7% of all college students by 1976.

In short, the educational and occupational gains of blacks since the passage of the 1964 Civil Rights Act have been fully documented by Richard B. Freeman in a report for the Carnegie Commission on Higher Education, entitled *Black Elite: The New Market for Highly Educated Black Americans.*

While time operates within a frame of neutrality, the educational community cannot afford that luxury. Equality of opportunity is at the heart of the American democratic ideal. Academe can either champion the plight of those whom the system has exploited historically, or it can perpetuate those practices which promote inequality of opportunity, and thus sabotage those principles which violate both the dignity and destiny of man.

While I know that these are "high sounding" principles which all Americans applaud, so often they are apt to get lost in the continuing struggle of a people whose self-interests are systematically in conflict with the "rising expectations" of those who seek full membership in American democracy.

Beyond the legal and political ramifications of the Court's decision, there is a higher moral priority that recognizes the historically damaging consequences of discrimination on the lives of minorities, and that America has a responsibility to both redeem the victim as well as its own soul to ensure that America will not forever remain a divided society.

Justice Thurgood Marshall capsuled the point that makes the tasks of proponents of affirmative action unending, in these words:

> It is more than a little ironic that, after several hundred years of class-based discrimination against negroes, the Court is unwilling to hold that a class-based remedy for that discrimination is permissible.

My appeal to you this morning is—let the enlightened of academe LEAD!

GRADUATE ADMISSIONS AND AFFIRMATIVE ACTION: CONDITIONS BEFORE THE BAKKE DECISION

Allen G. Marr

For the nation's graduate schools the ultimate *goal* of affirmative action should be that among advanced degree recipients each social subgroup be represented in proportion to the composition of the whole population. The immediate goal should be that each subgroup be represented in proportion to the composition of current recipients of bachelor's degrees.

246

This goal serves three main purposes:

- To expand the perspective of academic disciplines;
- To increase the representation of women and ethnic minorities among college teachers; and
- Social fairness

It is no accident that these purposes are closely related to three of the four objectives asserted by the Regents of the University of California as the basis of the admissions practices of the medical school at Davis.

Of the three purposes perhaps the first—expanding the perspective of disciplines—has received the least attention. The better understood part might be called educational pluralism: the acquaintance of students with diverse subcultures represented by fellow students. Yet, beyond this desirable educational pluralism, I think an academic discipline is limited in scope and intellectual power if its practitioners are monocultural. My conjecture that an academic discipline can be strengthened by cultural diversity is difficult to prove. I can offer in circumstantial support of it the robust health of academic science following the entry after World War II of persons from lower socio-economic groups into academic science.

I trust you are already well acquainted with the reasons which underlie the purpose of increasing the proportion of women and ethnic minorities among college teachers not the least of which reasons is to serve as role models.

The purpose of social fairness—social justice—needs no defense. Insofar as graduate education and advanced degrees are instrumental to the achievement of professional status, economic success, and positions of leadership in society, those instruments should be available to all.

The total program of graduate student affirmative action has many elements: increasing the national pool of qualified applicants, recruitment, admission, academic services, and financial aid. But of all these elements admission, obviously, is crucial to achievement of the goal of graduate student affirmative action.

As you know, graduate admission practices among institutions differ considerably, especially in regard to division of authority between faculty and administration and to the degree of decentralization. Nevertheless, in contrast with undergraduate admission practices, graduate admissions are, generally, more decentralized and have greater faculty participation.

I would like to review with you the three elements of graduate admissions: authority, standards, and selection process. Rather than to attempt generality I will use as a specific example the university with which I am most familiar—the University of California.

In the University of California, authority to establish graduate admission policy and minimum standards is delegated by the Regents directly to the organized faculty—the Academic Senate. The Senate vests this authority in the systemwide Co-ordinating Committee for Graduate Affairs and the several campus graduate councils. Authority to accord or deny admission vests in the graduate dean on each campus, but, oddly, the path by which this authority flows from the Regents is unclear.

Minimum standards of the University of California are not unusual: a bachelors degree from an accredited institution and a B-average (i.e., a grade point average of 3.0) in upper division course work in junior and senior years. The same specification of minimum standards has been in effect for many years. Two changes have been proposed. One is to increase the minimum grade point average in order to compensate for the inflation of grades in the past 15 years; the other is to require GRE scores for all applicants. The principal objection to the proposed changes is their stultifying effect on affirmative action. Minimum standards have been and will continue to be a focus of attention in affirmative action.

The third element—the selection from among those applicants who meet minimum standards—is by far the most critical not only in regard to the goal of affirmative action but also in regard to other, equally important goals of graduate education. In the University of California and in most other universities each application is referred to the faculty of the program for which application is made for advice on whether the applicant should be admitted or denied admission. Such advice is the primary basis for selection.

In September 1977 a task force on graduate and professional admissions in the University of California, chaired by Mike Heyman, Vice Chancellor at Berkeley filed its report. The report describes review of applications by the faculty of programs as diverse and decentralized. I quote from the report:

> "In some departments and schools most admission decisions are made by one faculty member, in others by an admissions committee, in still others by several admissions committees. . . In some schools and departments admission decisions by committees are made collectively; in others each committee member separately evaluates applicants and the respective judgements are summed. Some admissions committees have student members while others do not. In some, the students vote, in others they advise.
>
> "Great variation also exists in the criteria used and the weight assigned to each. There is no common practice with regard to standardized test results, the importance assigned to prior grades or work experiences or the statements submitted by applicants. Departments and schools do not compute GPA's the same way. Some require interviews and others do not. And so on."

The Heyman report endorsed continued decentralization of selection but with criteria established by the entire faculty and with more orderly and systematic procedures. It advised that procedures but not the weights given to criteria be published. On the matter of weights the task force opted for discretion.

The exercise of discretion—of subjective or summative judgment—has been important to the selection of outstanding graduate students and, thereby, to developing leading scholars and practitioners of the future. These selections are, therefore, crucial to the future of each academic discipline. In the past such exercise of discretion may have limited the cultural diversity of scholars. Without intrusion of conscious ethnic or sexual bias, selections tend (or have tended) to be "like me."

In this decade such exercise of discretion in selection at many universities has been directed toward increasing rather than reducing cultural diversity. The element of selection in graduate admissions is the most critical to affirmative action.

TRAINING PROGRAMS FOR GRADUATE TEACHING ASSISTANTS

Chairman: John E. LaTourette, *Bowling Green State University*
Ronald Fadley, *Bowling Green State University*
Paul Nash, *Boston University*
Robert A. Vogel, *Miami University of Ohio*

John E. LaTourette

The basic objective of graduate and professional education is to turn out scientists and professional leaders for commerce, industry, and government, as well as to provide a well-educated cadre of scholars and teachers for our academic institutions. The graduate enterprise within which this educational activity occurs is traditionally viewed by members of the academy, and hopefully by our nation's leaders, as a major national resource—the primary source of our future academic and professional leaders. Based on the work of Mary Jo Clark at the Education Testing Service, we have come to appreciate that the success of this enterprise cannot be measured simply by the prestige of the faculty involved, or the administration of graduate education, or the way in which the faculty are organized into departments, or the design of the curriculum, although these are essential inputs into the process. Ultimately, it is the development of the student's mind and the professional skills and competencies which make a critical difference in the quality of our human resources.

In noting the achievements of graduate and professional education in the United States, Hartnett and Katz comment as follows in *Scholars in the Making:*

> "During these (one) hundred years, much thought and effort have gone into setting up departments, recruiting faculty members, financing them, and attracting students. Not nearly as much thought has gone into planning the curriculum, and still less has been given to the student."

In their study of student perceptions of the graduate experience, they identify several problems which are relevant to our interest in improving the intellectual and personal environment in which graduate and professional education occurs and the development of the competencies which produce more effective scholars, teachers and practitioners. Of particular interest to us today are the following points:

- Students enter graduate school expecting to join a community of scholars, but many are pushed into relative intellectual isolation.

- Students expect to establish a close interaction with other graduate students, but the competitive atmosphere in many programs precludes the development of these opportunities.
- Students seek social and personal contacts to expand their lives. Instead, frequently they are overworked and emotionally deprived.
- Students in the last decade have found graduate education increasingly more impersonal, because of the vast expansion of enrollments in many programs.
- Finally, but most importantly, many graduate students express a strong interest in teaching. However, they usually are encouraged to neglect teaching if not to have a contempt for it. Some of their comments are as follows: "Adequate training for teaching rarely exists." "Graduate School in its current form is *no place* for training teachers."

The neglect of the development of teaching skills is supported by Mary Jo Clark's survey of doctoral departments. The emphasis on the preparation of scholars to the exclusion of the development of teaching competencies permeates the entire graduate establishment at the doctoral level. It is to be expected that high prestige programs would place considerable importance on the development of scholars/researchers and less emphasis on teaching and practitioner skills. It is surprising, however, to find that this emphasis reaches down to the departments on the lowest rung of the academic rating scale. Of the three disciplines examined in the Clark study, only the low-rated programs in history assigned more weight to the preparation of teachers than researchers, and only the low-rated psychology departments assigned more weight to the preparation of practitioners than researchers.

The neglect of teaching and practitioner preparation is serious regardless of how you approach the question of graduate education. On the one hand, the evidence about the lack of scholarship after the completion of the doctoral degree is overwhelming in most disciplines. Many Ph.D.'s never publish a single article. Of those who publish, only a small percentage contribute more than a few scholarly articles during their professional lifetime. In terms of their professional careers and commitments, therefore, most faculty are primarily engaged in teaching in contrast to research. On the other hand, historically, the majority of doctoral recipients in many disciplines have sought non-academic employment. For example, in chemistry, the third discipline included in the Clark study, only 28 percent of the doctoral graduates who planned to seek employment in the period 1960–1974 indicated a preference for *academic* employment. Using the results of the Annual Survey of Earned Doctorates for this period, the National Research Council's study, *A Century Of Doctorates*, arrived at this percentage by excluding the Ph.D.'s who planned to enter postdoctoral training or who did not have definite employment plans at the time of graduation. Even assuming that most of the doctorates in chemistry entering postdoctoral training eventually become faculty members, more than one-half of the Ph.D.'s are typically employed outside the academic community.

The post-graduate plans of psychologists also are interesting in view of Clark's finding that only the low-rated psychology departments assign more weight to the preparation of practitioners than researchers. Again excluding postdoctoral candidates and doctoral students who do not indicate any definite employment plans, 46 percent of the Ph.D.'s in psychology planned to enter non-academic employment. This reflects the fact that many of these people are employed in clinics and hospitals, either public or nonprofit, or are self-employed as clinicians.

In the case of chemistry it might be argued that an exclusive emphasis on research is the appropriate education for doctoral students planning careers in industry, but this is certainly not the case for psychologists. The need here for practitioner training is obvious. Furthermore, because of declining employment opportunities in academe, more of the doctoral recipients in the humanities and social sciences are destined to enter the non-academic marketplace. Perhaps, in order for many graduate programs to survive, these disciplines will have to experience a sharp decline in the percentage placement in academic employment which over the 1960–1974 period has been 80 percent in the social sciences and 88 percent in the humanities. The alternative is a Marxian army of highly-educated unemployables!

On Wednesday, Dorothy Harrison described her experience with a summer orientation program at New York University's business school to prepare approximately 50 carefully selected A.B.D.'s and Ph.D.'s in the humanities and social sciences for positions in major corporations. Her general feeling is that the program was a success. If the "Careers in Business" program is a successful approach to developing viable non-academic employment opportunities for doctoral students, I see no reason why the program (or equivalent alternative experiences) cannot be incorporated directly into the student's curriculum and/or practical internship experiences in the real world during his/her tenure in a doctoral or even a master's program.

In my judgment, the highly selective program Dr. Harrison described will not solve the problem of the projected 90,000 surplus Ph.D.'s in the humanities and the social/behavioral sciences by the mid-1980's. It is too selective to reach beyond the top one or two percent of the doctoral students. Furthermore it represents a major additional cost to doctoral education and does not break down the faculty-administrative barriers operating within graduate programs which reduce the potential for non-academic placement. I submit to you that an on-campus program can be more effective and less costly. Moreover, it involves faculty, administrators, and graduate students, working together to address the employment problems faced by the new Ph.D. If attitudes are going to change on both the campus and in the corporate board room, the joint development of internship sites provides an excellent milieu in which there may be a continuing dialogue between the academy and the business world.

With your indulgence, I will spend a few minutes outlining the major components of the comprehensive student development program we are developing at Bowling Green State University, in order to set the framework for discussion of teacher preparation at the graduate level.

The Office of the Graduate College at Bowling Green implemented a Professional Development Program (PDP) in 1972 in an attempt to round out the educational experience of graduate students and to develop a more humanistic learning climate (with a mental health orientation.) The graduate student Senate has offered splendid cooperation with the PDP, particularly in offering a social-recreational program that has been effective in reducing the social isolation of fulltime residential graduate students.

The basic objective of the Professional Development Program is to provide a holistic approach to graduate education—a set of experiences which contribute to the students' personal and social development; preparation for teaching, scholarship and professional practice; and the expansion of career opportunities. These are built on the base of the traditional curriculum, without sacrificing the integrity or academie standards generally associated with graduate education. Therefore, the PDP was designed as a multifaceted project to augment graduate program activities in five functional areas:

- Recruitment and admission, including affirmative action
- Generic orientation to teaching, research, and practitioner skills (transcending disciplinary context)
- Career planning and assessment
- Cooperative education (internships)
- Credential enrichment and placement

The rationale behind the program is that certain generic professional development experiences for graduate students can be most efficaciously mounted from within a single coordinating office, as contrasted with the diseconomies associated with a proliferation of mini-programs across a multiplicity of program areas. The focal activities of the PDP are typically not available through departmental auspices. This comprehensive, centralized, college-wide, and partially mandatory character of the PDP accounts, we believe, for its success and longevity. The PDP has become grafted onto the trunk of the university, thus avoiding the perils as-

253

sociated with add-on, experimental, innovative, soft money adventures that graciously fade away with the end of federal funding. Close liaison and consensus development with academic departments has also been an ingredient of its success.

The PDP was launched with the assistance of a grant from the Fund for the Improvement of Postsecondary Education. It also was augmented by a grant from the Ohio Board of Regents. Since 1975 the basic program has been funded by Bowling Green State University as part of the instructional program of the Graduate College.

Two grants this year from the United States Office of Education have given added impetus to the development of a comprehensive program. One of the grants is designed to fund the development of a cooperative education component which sponsors internship-like placements for graduate students in business, industry, government, and non-profit agencies. The award of a Graduate and Professional Opportunities grant has assisted us in strengthening our minority student recruitment and support services.

At this point it might be helpful to outline how this comprehensive program operates:

Phase I: Recruiting, Screening, and Counseling of Graduate Students

This phase is designed to inform prospective graduate students of the programs, services, and funding available for graduate students at Bowling Green State University. Affirmative action represents a central component of this phase. In addition to the usual array of supplementary stipends, fee payments, minority locater services, promotional literature, and campus visitations, the PDP offers backup services that are designed to reinforce affirmative action objectives once the minority students have matriculated. More specifically, funds are earmarked to support special counseling and skill development workshops to supplement the educational experiences that the minority students are receiving in their departmental programs. Moreover, funds are provided to sponsor workshops for faculty to the end of facilitating reinforcement experiences for minority graduate students.

Phase I also includes a research component wherein data are collected on incoming graduate students concerning their demographic characteristics, reasons for attending Bowling Green State University, career goals, and expectations within their degree programs. This information is designed to provide a reality check for counselors, advisors, and faculty concerning their clientele. Phase I also includes an evaluational survey sponsored by the graduate student Senate wherein students are afforded the opportunity to rate their educational programs, quality of instruction and curriculum, supportive services, and the psychosocial climate of their program area.

My description of phases II and III will be brief because they will be considered in more detail by our speakers:

Phase II: Presession Orientational Workshop to Graduate Study

A week-long orientation workshop is sponsored for all new graduate assistants in the week preceding the opening of the Fall quarter. This workshop includes an overview concerning the university, the local community, and available resources. It also contains units on *pedagogy* (e.g. use of media in the classroom, lecturing, group discussion, grading, and laboratory teaching), *research* (e.g. computer facilities, statistical packages, archival collections, electron microscopy, scholarly publication), *placement* (e.g. career decisions, credential enrichment, and the job search), and physical/emotional *health*.

Phase III: Departmental Follow-up

The universitywide workshop described above is followed by departmentally sponsored courses and practica in more discipline bound aspects of graduate education—particularly with respect to preparation for college level teaching, research, and practitioner skills. As part of this component, most academic departments have instituted a pedagogy course focusing on the teaching of a particular discipline coupled with a supervised teaching experience on a graduate basis. This aspect of the PDP has helped improve the quality of instruction offered by graduate assistants.

Phase IV: Advanced Seminars on Higher Education

Graduate students who aspire to careers in higher education are encouraged to participate in several interdisciplinary courses that deal with the structure of education at the postsecondary level. These courses include philosophical, historical, psychological, sociological, and administration aspects of the academy. These courses are offered on an elective, interdisciplinary format by mainline faculty on an in-load basis. Unfortunately, the number of graduate students who have chosen to enroll in these courses has been less than gratifying; the departmental FTE chase is a factor here in the lukewarm response.

Phase V: Cooperative Education Component

In conjunction with the Office of Education grant, the Office of the Graduate College presently has a full-time internship site coordinator who is developing cooperative education placements for graduate students. We view this component of the PDP with special interest since it has strong placement implications for program areas where placement prospects are soft. We also view the cooperative education component as a recruiting mechanism in future years once this phase has crystalized.

Phase VI: Credential Enrichment and Placement

We approach the development of credentials and job placement as an ongoing process from the time the student first enters the program. To this end, we offer modules on credential enrichment (such as preparation of videotape clips to document teaching skills), interviewing techniques, resume preparation, and the job search. Through these periodic reality checks, we attempt to prevent shocks to the student as the time of graduation approaches when many students first begin to contemplate placement.

Summary

A holistic approach to the preparation of graduate students for roles as teachers, scholars and practitioners is required to meet today's challenges in the marketplace. The fact that we are educating students for a variety of roles and careers needs to be placed in the forefront of our approach to graduate education. Except for those few who will receive academic appointments at the most prestigious universities, the scholar-only model is no longer appropriate. Teaching and practitioner preparation activities must be given equal weight. On the basis of our experience, I am optimistic that this can be accomplished without depreciating the value or quality of research in graduate education.

Today's session describes three different approaches to the orientation of graduate students to teaching:

- Dr. Ron Fadley of Bowling Green State University will describe the Graduate College's Professional Development Program which includes "a week-long training program for teaching assistants."
- Next, Dr. Paul Nash of Boston University will discuss "a longitudinal training program for teaching assistants"
- Finally, Dr. Robert A. Vogel will indicate the experience of Miami University of Ohio with "a half-day work session for teaching assistants."

THE PROFESSIONAL DEVELOPMENT PROGRAM IN THE GRADUATE COLLEGE OF BOWLING GREEN STATE UNIVERSITY

Ronald L. Fadley

Bowling Green has long recognized the need to improve the teaching done by its graduate students. However, graduate assistants and teaching fellows do not always recognize the need to develop or improve their teaching skills even if they are going into a classroom for the first time. Many students being offered assistantships or fellowships believe that

256

experience and knowledge are all that are needed for effective teaching. Bowling Green State University did not feel that knowledge in the discipline is sufficient to ensure effective teaching, so the institution set about to find ways to improve the attitude of its incoming graduate students toward teaching as a professional skill; in a sense to "turn them on" to effective teaching.

In 1972, we identified a group of graduate students who were concerned about their teaching effectiveness. These graduate students were primarily interested in two phases of their teacher preparation. Many were concerned about the kind of teaching that they were doing presently among freshmen and sophomores without a teaching background. Particularly, they were concerned about their basic course teaching assignments.

There was also a more far reaching concern among these graduate students. They realized that they were going to spend their lives in academe. They were going to have to become effective teachers in order to survive in the profession and attain success in the professorial ranks. It was with this frame of reference and in this attitude of the importance of teaching that Bowling Green State University was able to make a step forward in the teaching effectiveness of its graduate students who were going to be future faculty members. There were pragmatic ramifications of such a move. With dwindling enrollments across the country, we felt that we could not wait until we had a drop in enrollment to begin to make sure that the instruction that the undergraduates were getting was effective. We felt a strong obligation, since we have such a large graduate program, to turn out as effective an instructor as possible.

A decision was made to not deal with the graduate students on a voluntary basis; that is to let them decide individually who needed work in teaching methodology, strategies, skills, and the artistic aspects of teaching. We realized that people are often short-sighted. Therefore, our task was not to just offer teacher training for those incoming graduate students who had a felt-need or who would have a felt-need at the end of their first year of teaching experience in the basic courses. We wanted to develop teaching skills in all of the incoming graduate students who were going to be concerned with teaching while at our institution and beyond.

In 1973 the Graduate College developed a proposal which was sent to the Fund for the Improvement of Postsecondary Education. In July of 1973 a three-year research and demonstration grant was received by the University. By this time Bowling Green State University identified six phases that they felt were necessary to develop. Dr. LaTourette has summarized several of these for you and I will explain the rest.

Phase One: A workshop on instruction in higher education. This was to be an intensive week-long workshop on "How to teach in post-secondary education."

Phase Two: Departmental courses, practica, and evaluation. The workshop was to serve as a springboard so that students going back to departments could then enter into course work on instruction in post-secondary education, and be evaluated by a graduate advisor responsible for that phase of their development. This is now happening in many departments.

Phase Three: Advanced program pedagogy courses. These courses were to be interdisciplinary support courses in teacher preparation.

Phase Four: Special interinstitutional relationship. This includes the development of off-campus internships for students who have demonstrated teaching proficiency. They will teach at another institution and receive credit.

However, phase one, the workshop on instruction in higher education, is the phase that has had the most dramatic and significant influence. It has had an impact, both positively and negatively, on incoming graduate students, faculty and administration. In other words, it has not gone unrecognized in nearly every quarter of the university. Approximately one week prior to the start of Fall quarter classes, all new graduate assistants and teaching fellows must enroll in an intensive workshop on teaching in higher education. I would like to describe the workshop for you and explain how we arrived, by success and failure, at the decision to have the workshop structured as it is now.

Day One: The students begin an orientation process. That is, they spend part of the day in orientation to the community, the university and their departments. They are able to obtain information about housing, telephone service, utilities; indeed all of the community services. You might ask yourself what this has to do with teaching? We know from experience that many graduate students because of financial considerations will not come to Bowling Green until the weekend before the workshop, and have a limited time to settle into the community. Remember also that many of them are married and that all of them come to a strange, small town in the Midwest, surrounded by a minimum of sixteen counties of farming communities. Their families may be housed in an expensive motel. With the encouragement and help of their group leaders, the person chosen from their discipline to instruct them, they will spend whatever part of the day is necessary to take care of their families and getting settled into the community. At approximately 3:00 p.m. the graduate students, once again with the group leaders, will migrate to their department to meet departmental chairs and take care of a second necessary consideration. That is, they are more concerned about officing, office keys and textbooks for their teaching assignment, than they are about becoming effective teachers. Only two hours are spent in instruction on teaching on the first day.

Days Two & Three: We have found that many of over four hundred incoming graduate students already have teaching experience. Some graduate students are not going into teaching at all. We have a mix of experienced and inexperienced, teachers and non-teachers. We decided to go to a convention format, offering programs on teaching, research and practice. The student can meet needs by seeking out desired programs. For example at any one hour there might be programs on lesson-planning, games and simulation, research proposal writing, or laboratory safety. Every hour-and-a-half new sessions are offered which will help them at Bowling Green State University. In the yearly workshop evaluations by participants, the convention format is highly received and it was extended from one to two days. Workshop sessions are taught by university faculty, superior graduate students with some special expertise to offer, and off-campus resource people.

On the second and third days students spend at least an hour in their department for further orientation. We have found that our well organized departments have many experiences to get them ready for their departmental assignments. We feel this complements the work we do with them and moves them from the general to the specific in teaching skills, research and clinical practice.

If I may review, the student has an orientation to the university, the community and the department in which he or she will reside. They have two days of workshops, seminars, and conference style experiences, multi-centered around teaching and non-teaching interests. On the second and third days the graduate students will also spend some time with group leaders who will work with them, according to their needs, on lesson-planning, preparing for their first day as instructors, grading and evaluation; in fact on all of the survival techniques of which they may not be aware.

Days Four & Five: Except for two excursions back to their departments, they will spend their time in self-contained units within their discipline with a group leader from that discipline. They experience one practice teaching session and micro-teaching session. They can pick subject matter from their own department, indeed from the course they will be teaching the following week, and try it out on their peers and group leader. The group leaders must video tape the practice teaching for playback evaluation. Overall, the workshop proceeds from orientation, to generic skills, to specific skills needed in their departments.

The second most important phase we have developed is the internship. I first want to discuss our teaching internships and then our Cooperative Education Program. Ohio is blessed with a plethora of postsecondary institutions. Many of these institutions, most of them small, are in a sixteen-county area around Bowling Green State University, which is the major institution of higher education in Northwest Ohio and one to which the other institutions look for leadership in a society known as the Northwest Ohio Consortium of Colleges and Universities. Through this consortium Bowling Green State University has developed off-campus internship programs for graduate students. Once a graduate student has demonstrated teaching excellence he or she will be eligible for an off-campus internship. Many of the institutions are having financial problems caused by inflation and dropping enrollments. Through our internship program we are able to help these institutions continue to do an effective job of teaching and at the same time give our own graduate students an opportunity to teach in an institution unlike our own. This has a pragmatic ramification for graduate students. It indicates to a prospective academic employer that Bowling Green State University feels that this graduate student is a superior teacher. The cooperating institution gains a superior teacher at a minimal stipend for their students. Importantly, a number of our graduate students have found employment with the host institution.

In January of this year we applied for a federally funded cooperative education grant which we received on September first. It is a five year grant and we are now placing graduate students in business, industry, governmental and non-profit organizations. Ours is a university-wide program available to graduate students in all disciplines. In the short time we have been in existence we have found success in terms of both departmental and community acceptance.

We have placed a technical writer and a computer scientist in the aircraft industry, both at a good salary. We have placed two American studies students in an art museum and a presidential library and we have promised placements for two philosophers, in business and law. We have placed or have promised placements in criminology, accounting, gerontology, recreation, pre-engineering, insurance and personnel.

Phase two, the workshop itself, and the off-campus internship program have been the major thrusts of the Professional Development program. It should be realized that some phases have not come to fruition. For example, we have just started to develop phase four—advanced program pedagogy courses. We are one of the institutions in the United States that has taken a definite step forward in trying to help its incoming graduate students become effective teachers. We look at it not just from the viewpoint of the time they spend with us. For the rest of their academic lives, in whatever institution they go, they are going to represent Bowling Green State University in their teaching. It can easily be discerned that the Professional Development program exists to aid future faculty by developing skills in teaching methodology. The program is really a process of educating the graduate student from the point of entry into teaching in the university setting, refining his teaching skills, evaluating him, and finally, if he is worthy, credentially preparing him for future university teaching. We feel this is an important process.

A LONGITUDINAL TRAINING PROGRAM FOR TEACHING ASSISTANTS

Paul Nash

The program I should like to describe is the Open Enrollment College Teacher Training Project, which I directed at Boston University, beginning in 1974. We started the program with a number of assumptions. One was that, although most Ph.D. graduates in America are trained to be proficient researchers, few are trained adequately for the task that many of them will spend most of their professional lives doing—teaching. Some gain random experience as teaching assistants during their graduate training. But relatively few have the opportunity to examine the responsibilities of teaching and try out new teaching approaches in higher educational institutions. Another assumption was that the proportion of adult and non-traditional students in higher education was going to increase and that, as working people, housewives, and professionals returned to college and university, the need for teachers trained in a variety of non-traditional pedogogical approaches would grow.

With a grant from the Fund for the Improvement of Postsecondary Education, Boston University enrolled some of its ablest Ph.D. candidates in the humanities and social sciences into a new program to provide training and experience in teaching students in open enrollment colleges and universities. Trainees completed the program in three phases, each one semester in length. In the first phase, the trainee participated in a seminar conducted by a senior professor in his or her field who had particular interest and competence in teaching. The seminar investigated the problems and approaches associated with teaching the particular subject in diverse settings. At the conclusion of the semester each team of trainees and the supervising professor had prepared a specific course, including teaching strategies.

In phase two the trainee-professor teams taught their prepared courses in Boston University's Metropolitan College, a college that enrolls an evening population of great diversity, including some of the non-traditional students found in many community colleges. In addition, during the second semester, workshops and continuing consultation were provided for the trainees on issues that arose in their teaching. This service was provided by staff consultants drawn from advanced graduate students and experienced teachers from the School of Education.

In phase three, the trainee teams took their courses outside the university into one of the cooperating community colleges in the area, where they taught the course again, under the supervision of the senior professor and with the continuing support services of the Boston University School of Education staff. Members of the program came from several fields, including anthropology, history, sociology, English, American studies, and political science.

Our training program can best be seen in terms of a tripartite division of skills or competencies. They are the organizational or systemic, the interpersonal, and the personal. Accordingly, the remainder of my description will divide into these three dimensions. This is not to suggest that, in a phenomenological sense, they are separable. But the threefold schema helps me to analyze what occurred.

Organizational/Systemic Competence

In one sense, the system for these trainees was the community college. We conducted workshops on the culture of the community college, led by faculty from collaborating community colleges, for the purpose of introducing the trainees to some of the assumptions, practices, and peculiarities of open enrollment institutions. For Ph.D. candidates who had spent almost all of their academic lives in selective institutions, this introduction was invaluable. Even so, their transition from graduate school culture to community college culture was often painful and sometimes fraught with peril. One example of the traps awaiting the unwary is the following. In arranging for the placement of a team of trainees under the leadership of a senior professor from the anthropology department, I set up a meeting for the team with a small group of faculty and administration from a local community college. The anthropology team of would-be teachers showed up in graduate school "dress": patched jeans, sweaters, unkempt beards, sandals, beads. The community college group appeared in community college "dress": three-piece suits, ties, trimmed hair, brief cases. The impression created by the anthropologists on their community college hosts did nothing to ease our entry into that particular placement.

In another sense, the system for the trainees was Boston University. It sounds simple enough, but in fact they had to thread their way through three or four subcultures of this system: the Graduate School, the School of Education, Metropolitan College, and the College of Liberal Arts. The trainees themselves were enrolled in programs in the Graduate School. Their supervising professors all held primary appointments in the College of Liberal Arts. The staff and consultants working with them were drawn mainly from the School of Education. The trainees taught their courses first to the evening class population of Metropolitan College. Each of these sub-systems had its own cultural assumptions, stereotypes, and biases. We discovered anew that the suspicions, barriers, and isolating traditions that impede communication and collaboration among the schools of a single university are often greater than those separating the university from other institutions. Historians from Boston University's College of Liberal Arts are more accustomed to talking to historians from Harvard than to their colleagues in Boston University's School of Education.

One of the saddest discoveries of the program was that the ancient and barren conflict between liberal arts and pedagogy, between Graduate School and School of Education, is not yet quite dead. Most professors and trainees were refreshingly open to the essential dialogue between these two entities. But a few, even in this program, were virtually closed to the pedagogical aspects of our activities. Needless to say, little change was observed in their behavior over the life of the program. In retrospect we can see that such a closed attitude should have been a disqualification from participation in the program.

One of the systemic lessons learned by the trainees was that, if one wishes to affect a system, he cannot afford to ignore the power of symbolic acts and events. It became symbolically very important that some of the most renowned research scholars in the university were involved in what was essentially a *teaching* program. This served to disseminate the message that sound scholarship and good teaching are not antithetical but can be mutually enriching enterprises in higher education. The creative tension between rigorous scholarship and effective teaching was a constant theme of the program. Most of the trainees were contemporaneously engaged in dissertation research or writing while involved in the program. A workshop we conducted on the conflict between writing and teaching was well received by the trainees and was judged to have helped them to deal effectively with that systemic tension.

Partly through our deficiencies, the trainees learned the importance of widely participative planning in order to be effective in the system. Our planning was careful and thoughtful but, because of some unexpected telescoping of our schedule, it was largely carried out by Boston University people. We subsequently paid for this narrowness in many ways. The program would have been stronger if it had included from the outset all the principal agents, especially the community college faculty associates and the most closely linked administrators. Despite the unceasing efforts of myself, my staff, and the Boston University faculty members, we never wholly succeeded in convincing the community college members that this was not just a Boston University project. Had the community college people been involved in planning from the beginning, they would have been more likely to regard the project as their own. We needed this sense of widespread ownership and responsibility when things became difficult, and it was lacking.

The biggest systemic error we committed in the program was that we did not award academic credit for the pedagogical/consultative part of the trainees' activities. They were all extremely busy people, with more demands on them than they could easily meet. As a result, when something had to go, it was, for some trainees, often our pedagogical workshops and training that were sacrificed. One of the consequences of this was that, despite our most ingenious efforts, we never found a regular time when all faculty and trainees could meet together in a common training experience. Had we been able to do so, some of our major systemic problems would have been overcome. This lack made it much more difficult to establish a sense of community. All workshops had to be repeated more than once. The staff's work load was multiplied. Our efforts were diluted. In retrospect, I judge that we should have set a common workshop-seminar time at the outset. All faculty and trainees should have been required to attend. Given the pressures and demands of academic life, it would have to carry academic credit for the trainees. Ability to meet this commitment should have been a *sine qua non* of membership in the program. This is the single change that would have done more than anything else to improve the impact of the program.

Interpersonal Competence

As can be gauged already from what I have described above, my experience with the program led me to conclude that effectiveness in a system consists largely of effectiveness with and through other people. Accordingly, much of our efforts were related to the development of interpersonal effectiveness among the trainees. I have already mentioned stereotyping. It was interesting to discover that academic training does not seem to immunize one from the pitfall of relating to people as members of categories rather than as individuals. It is hard work trying to relate to someone by peeping out over the edge of the box that he has put you in. There are forces operating in higher education that reinforce rather than dissolve these barriers. This is not the place for a full analysis of those forces, but they stem from a fearful, competitive, individualistic ethos at the heart of the university. In the life of this program, those barriers did not fall down by magic, nor did stereotypes evaporate overnight. But communication did occur. Faculty and students from different schools did meet, talk, eat, drink, and work together. Some prejudices were reinforced. Some stereotypes were deepened. But, on the other hand, some genuine mutual respect developed across school lines. Some friendships were built. And much effective communication and collaboration were achieved among people who customarily live in the same institution for years without ever becoming aware of one another's existence.

Our evaluation of the project showed clearly that one of the most highly valued benefits of the program, as perceived by the trainees, was the opportunity to work closely over a two year period with a highly competent scholar-teacher. The process of collaboration among the professor-trainee teams that preceded and accompanied their teaching in Metropolitan College and the community college was regularly evaluated as a significant interpersonal, pedagogical, and professional experience for the participants. The relationships that developed between professor and teaching assistant were characteristically close, warm, mutually supportive, and the source of significant growth.

Similarly, another highly rated benefit of the program was perceived by the participants to be the experience of working collaboratively with their fellow trainees in planning, team-teaching, and evaluating their courses in Metropolitan College and the community college. This is not to suggest that they found these tasks easy. The interpersonal skills required for collaborative planning, team teaching, and joint evaluation are formidable. Moreover, our trainees found that there was disastrously little in their previous academic training that had fitted them for these collaborative tasks. Indeed, one of the serendipitous discoveries of our focus on the interpersonal, interdependent mode of acting and thinking was that the American academy is largely a training ground for individualism, isolation, and alienation.

Not surprisingly, we discovered that some teams were more successful than others in achieving the goals of the program. It gradually became apparent that those teams and trainees who were most successful were those who from the beginning best understood, and were most clearly committed to the program's goals. In the other teams, the program staff found that much time had to be spent in explanatory and justificatory activities that could have been better spent in more relevant and pedagogically focused activities. In these latter teams, the trainees had been selected by the senior professors in a hasty, somewhat random fashion. There was limited input by others into the selection process. Interpersonal issues and values were depreciated. As a rule of thumb, we can say that, the more interpersonal issues were ignored by the teaching teams in their planning process, the more intractable were the interpersonal teaching problems that subsequently arose in their classrooms.

The third experience that was highly rated by the participants as having significantly benefited them in the program was, predictably, actually teaching their courses in Metropolitan College and the community college. Here again, interpersonal skills and knowledge were perceived as both crucial and often lacking. The acquisition of the complex skills of communication, listening, facilitating student participation, questioning, responding, developing collaboration among students, dealing with the host of subtle interpersonal relations and issues in classroom and institution, relating effectively to their new and sometimes threatened colleagues in the community colleges, was an enormous and sometimes daunting challenge for these trainees, who often felt that their Ph.D. training had done much to help them to operate effectively in the world of library and laboratory but little or nothing to help them survive in the world of people.

An important dimension of the program was observation of the trainees teaching by staff consultants. Each observation session was followed by a feedback session in which the staff consultant shared with the trainee what he or she had seen, listened to the trainees goals for the class, and made suggestions for improvement in the light of those goals. Predictably, this process was perceived by many trainees as threatening, more in prospect than in actuality. However, I worked hard with the staff consultants on ways to give non-threatening yet helpful feedback. We developed an effective approach that is too complex to be fully related here. We succeeded in developing an interpersonal relationship with almost all of the trainees that became a foundation upon which we could observe sympathetically and accurately, give feedback supportively and constructively, and help the trainees to improve their teaching effectiveness. This interpersonal foundation between staff and trainee became a model, which we repeatedly saw the trainees themselves using with their students in the later stages of their training, with correspondingly increased effectiveness.

Most encouragingly, as time went on, we saw an increasing number of trainees treating one another in the respectful, interdependent manner in which we had treated them. They began increasingly to listen openly to one another, to learn from one another, to be one another's teachers and resources. Thus, we staff members became ever less necessary to keep the teaching/learning process moving. We were working ourselves out of a job and proving our dispensability.

Personal Competence

The third and final dimension of the program that I should like to mention is the personal. Just as we found that systemic effectiveness was largely a function of interpersonal effectiveness, so we found that interpersonal effectiveness was to a large extent a function of personal effectiveness. The ability to communicate and relate with others we found to be highly correlated with the person's ability to allow the different parts of himself to communicate with one another. If his head was out of touch with his gut, if his intellectual formulations were in conflict with his emotional needs, if his moral imperatives were at war with his physical urges, the split inevitably revealed itself in his relations with others—colleagues, peers, students, staff. We discovered, not surprisingly, that our trainees did not leave their private, internal lives at home when they came to school. Moreover, we discovered that that private, internal business was so powerful that, by contrast, our cognitive, intellectual activities were puny and often brushed aside by the trainees' more urgent business within.

As a result, we learned to suppress any lurking temptation within us to provide a packaged program for all trainees. We learned anew that the *person* is the basic unit, the source of all surprise in the universe, and liable always to upset our tidy predictions. In fact, this accorded nicely with one of the basic tenets of the program's philosophy, that there is no one best way to teach and that the task for each teacher is gradually to discover and create his/her own unique teaching style. Our feedback, therefore, was able to focus on each trainee's particular strengths, talents, and possibilities, rather than on his defects as measured by his failure to conform to the model of a hypothetical, ideal teacher.

One mechanism that was particularly effective in furthering this goal was videotaping. All of the trainees were videotaped in their classrooms, again not without some initial anxiety and resistance. Virtually without exception, they found this a valuable experience. For most of them, they were seeing themselves teach for the first time. One of the great virtues of videotaping is that it provides one of the rarest gifts—unmediated feedback. With even the most trusted observer, his feedback is filtered through his perhaps sympathetic but nevertheless heavily interpretative person. With videotaping, I see myself just as I was, and there can be no denying that I said that, did this, ignored that, in just that particular way and with all those strange mannerisms. By using videotape with the trainees, we were able to help them to identify the things that they themselves wanted to eradicate, emphasize, introduce, or change in their own teaching. In discussing a videotape of a trainee's class with him, we were able to see clearly the essential connections between what was occurring in his class and what was happening inside him. The two invariably bore a strong and telling relationship to each other.

The trainees who learned most through the program were those whose inner systems were sufficiently in harmony to permit them to open themselves to the personal significance of the interpersonal messages they received. We and they learned that teaching is not merely an intellectual activity but a holistic activity, in which the whole self is the sole instrument through which all knowledge, skills, experiences, training are filtered. Teaching is not just head stuff but person stuff. We found that, engaged in a program to help students learn how to teach, we were really engaged in a process of helping complex persons to mature.

This may seem like a discouragingly global conclusion. But, if our program demonstrated that the person is himself a system of subselves, all of whom must be respected and listened to, it also showed us that the growth of the person takes place not only through this internal process but also in interaction with others and in interaction with organizations. Training of teachers is most effective when it operates on all three levels—the personal, interpersonal, and systemic—and actively and imaginatively explores the connections among them.

A HALF-DAY WORK SESSION FOR TEACHING ASSISTANTS

Robert A. Vogel

Now we come to that orientation program which operates from the premise of the zero-based budget. I have divided my remarks into three areas: background information behind the program, the program itself, and overall concerns and the future.

In covering the background to Miami's program, I would like to cover briefly some demographic information about Miami; discuss impressions on which we based our approach; discuss criteria which emanated from these impressions, and describe how we developed what eventually became a half-day program.

Miami's Oxford campus has a total enrollment of approximately 15,000 students, of which 1510 are graduate students. Of these 1510, there are 635 graduate assistants and teaching fellows (Ph.D. candidates). Miami is organized into five principle schools with the majority of teaching assistants residing in the College of Arts and Science. The other teaching assistants are distributed among the School of Education and Allied Professions, the School of Business Administration, the School of Fine Arts, and School of Applied Science. There are ten departments offering doctoral programs (both Ph.D. and Ed.D.) and the specialist degree in three programs. Thirty-nine departments offer the Master's degree in a total of 100 programs and fields of concentration.

The first impression was that a significant number of freshmen and sophomores have contact with graduate instruction (by T.A.'s) through introductory courses. The nature of this involvement is not transitory; i.e., there is, in most cases, a greater identity between the teaching assistant and the undergraduate. Because of age and other socio-cultural factors, the undergraduate feels more comfortable relating to the teaching assistant than to the regular faculty. In short, we recognize that the teaching assistant does have a significant impact on the quality of our undergraduate program.

Given this impression, we recognized two related problems that greatly effect the quality of the relationship between the teaching assistant and the undergraduate: (1) most teaching assistants, except those in the School of Education and Allied Professions, have had little or no teaching experience and are thrust into a classroom milieu with little or no preparation for this experience; and (2) the teaching assistant is neither fish nor fowl. He or she must alternate between the role of student and instructor. As many of us recognize, this role conflict has become just one of the rites of passage that every teaching assistant must endure. Unfortunately, this rite of passage does have its effects. In my own experience of directing teaching assistants, some will at times side with the student on matters such as department exams and course grading practices.

Further support for this role conflict can be seen in both student health service and psychological counseling statistics. The director of the student health service at Miami University informed me that graduate students are seen by the health service on a disproportionate basis when compared with other class levels. The director of the student counseling service at Miami reports that graduate students in the humanities and social sciences are seen disproportionately to their numbers. He added that the stigma attached to coming to a counseling service keeps the overall number of graduate student visits down. "After all, the teaching assistant is now told that he or she is a professional—a teacher and advanced professional in his or her field."

Our second impression was put in the form of a question. "What are we doing as an institution to prepare the teaching assistant for the full-time instructional roles many will assume in the future?" This led to a third impression. An informal survey of departments at Miami found some departments doing a great deal in teaching assistant orientation and other departments doing little if anything. In addition, we found wasteful duplication of time and energy on the part of those university services used by every teaching assistant, i.e., the audio-visual service, library, computer service were all giving countless orientations on a department by department basis.

In developing our teaching assistant orientation, we established four criteria:

- Cost—the program would have to be based on a zero-based approach.
- Department support—Miami is organized on a collegial model with the department being at the foundation of this model. Hence, any

program must be coordinated with each school or college and must be careful not to leave the impression that the Graduate School is attempting to usurp a department's prerogative.

- Graduate student support—this speaks for itself. Any program must have the full support of the population that is affected. Therefore, at all stages of planning, the teaching assistants or a representative must be consulted.
- Legal requirements—any new program, such as an orientation, requiring the participation of the teaching assistant will have to be stipulated in the award contract.

A committee was formed, based on a careful representation, from the Dean's Graduate Student Advisory Committee, the Graduate Council, the faculty, and teaching assistant representation from each of the schools and the College of Arts and Science. While the total membership on this committee numbered approximately fifteen, it was felt that this was necessary in formulating a program of this type.

The committee examined other programs, specifically, the program at Bowling Green State University. Dr. Ronald Fadley, director of the teaching assistant orientation at Bowling Green, visited Miami and advised us on the pitfalls and procedures in developing such a program. Bowling Green has one of the most extensive programs in the country involving a one-week orientation and follow-up sessions for all of their teaching assistants.

For both informational and political reasons, the committee decided to survey all present teaching assistants to discern what their needs and interests were in those first few weeks of the Fall term. The survey served a useful purpose of informing the university community that the Graduate School was planning an orientation program. While the survey was being conducted, members of the committee conducted meetings with all divisional deans and department chairmen both to inform them about the proposed program, and to gain their insights and suggestions. This process lasted two months.

Based on the replies of the teaching assistants, we then set out to plan our first "All-University Graduate Student Orientation." For reasons of graduate student collegiality, it was decided to include all graduate students, recognizing that most in attendance would be teaching assistants. Our first program was a one-day affair and was composed of general orientation sessions in the morning and workshops on specific topics in the afternoon. It is interesting to note that the teaching assistant was primarily interested in those pertinent services needed to get started in a new environment. A subject such as university history and cultural facilities did not hold their interest at this time.

An evaluation of the one-day program found that the teaching assistant was suffering from an information overload; i.e., workshops on placement, teaching methods, and research opportunities, while desired, were not useful at this time. The workshop that was rated the most useful was on the "Unique Problems of the First-Year Graduate Student in an Instructor's Role." Here the teaching assistant had an opportunity to learn in careful demographic terms a profile of the Miami undergraduate, followed by a general discussion of the problems a first-year teaching assistant will face.

The following year we designed a half-day program with the afternoon workshops being distributed through-out the school year. The results of this half-day program proved to be a stimulus to many departments to offer their own orientation/work session that afternoon. It should be noted that the workshop on "Unique Problems . . ." was retained and proved a vital springboard for the department's afternoon work session.

In addition to the criteria outlined earlier, the one major concern that confronts our program and, perhaps every other, is timing. As one teaching assistant put it, "Everybody wants my body, mind, and soul." Those first few weeks of any school year are incredibly crowded with meetings and more meetings. Trying to squeeze in a half-day session will always remain a delicate issue, for it ultimately means that something else will be neglected.

The future of our program at Miami looks bright. What is most exciting is that the Graduate School has provided a subtle stimulus for departments to develop their own orientation program. Further, we have cut down significantly the overlapping and duplication of orientation programs by the essential university services. Each of these service areas has been most grateful for this conservation of time and resources. I would be remiss if I didn't say that, yes, it is frustrating to run a program on a zero-based budget, but we do feel that we have made some significant strides in recognizing some long overlooked needs of the teaching assistant at Miami University.

ADAPTING CURRICULUM AND DEGREE REQUIREMENTS FOR INTERNATIONAL STUDENTS

Chairman: Marvin J. Baron, *University of Calfornia, Berkeley*
George G. Karas, *Iowa State University*

The session was designed to provide a preliminary report of a joint study conducted by a group on which the Council of Graduate Schools has been a collaborator with the National Association of Foreign Student Affairs (NAFSA). Last summer, the Council was invited by NAFSA to participate in an assessment of certain academic and curricular needs of foreign graduate students. This effort was to be part of a contract which NAFSA has with the U.S. Agency for International Development (AID).

Two particular areas were identified for current study by the group: (1) The group was requested to study policies and procedures of graduate programs which allow students to write doctoral dissertations using home country data and situations; and (2) it was asked to determine the extent to which institutions and departments permit modification of curriculum requirements in order that students may meet specific needs or vocational goals occasioned by their responsibilities when they return to their home countries. The study group included representatives from CGS and NAFSA.

A relatively short survey questionnaire was developed by the study group. Copies were sent to the foreign student advisor at 92 campuses who contacted the graduate dean for assistance in identifying three faculty members who would complete the survey. Faculty from three separate disciplinary areas were sampled. After the questionnaires were completed by the individual faculty members, the foreign student advisor attempted to arrange a meeting with them and the graduate dean to discuss the survey questions from an overall institutional perspective. Thus, the foreign student advisor had primary responsibility for data collection and returning the completed questionnaires to the study groups.

Preliminary results were discussed at this session. A final report will be ready during Spring 1979.

VISAS, FINANCIAL SUPPORT, AND FEES FOR INTERNATIONAL STUDENTS

Chairman: Elmer F. Baumer, *The Ohio State University*

Elmer F. Baumer

Policies governing admission of international students varies from institution to institution. As a result an institution's visa policies will likely affect the number of international students enrolled at that institution. Most international students are quite aware of the short run and long run advantages and disadvantages of various visas. Applicants with good academic records know they have alternatives and with a little patience and work can locate a graduate school willing to issue them the visa they want.

For example, an applicant who wishes to remain in this country after completing the graduate program will frequently not accept an admission with financial aid to an institution if doing so requires the student to accept the J visa. This visa requires a service commitment by the student to his or her home country. A little shopping around will likely locate an institution with a comparable admission package and one willing to issue the F visa to the student. Such a visa does not require a service commitment.

In most cases graduate deans seem to feel that the issuance of visas is the responsibility of the Immigration Service and/or the on-campus offices of international students. The Immigration Service places very few restrictions on universities relative to the issuance of visas. The general attitude of the INS is that the institution must "satisfy itself" with respect to such issues as qualifications to undertake the program, language proficiency, financial support and the rate of progress through the program. These factors become very important to some international students. The lack of uniformity in these matters has introduced a kind of competition for international students among institutions that goes well beyond the quality of the academic programs and in the long run, bring about a situation where the least common denominator prevails.

Financial Support

Financial support programs for international students from some countries during the past few years have presented real problems. Most institutions have experienced extended periods of time last year where foreign students from one country received no financial support even though the students from that country were on full support from their home government. In many cases this tied up most funds available through international student offices to support the emergency needs of international students. As a result of these experiences, some institutions are considering stronger and more restrictive financial policies toward students from some countries. Some institutions may require the foreign country to deposit sufficient funds in a bank designated by the institution before any students from that country will be admitted.

In the area of financial support for international students there is also the question of whether the current level of graduate student support in some disciplines attracts only international students. Is it a fact that stipends paid to graduate students in engineering, for example are so low as to attract few if any domestic graduate students? It could also be that starting salaries are so high that few if any domestic students are willing to forego the income to complete a graduate program. In fields such as engineering there are research funds available to pay modest stipends and these are considered quite satisfactory to most foreign students. The result has been very high concentrations of foreign students in some disciplines.

On the other hand some international students have found it almost impossible to survive on the stipends provided for graduate student type positions. This situation has become particularly acute for married foreign students with families. Many such students underestimated the total cost of living in this country. Others find it almost impossible to provide such basic services as education for their children when it is not available in the local community.

Fees

Fees charged foreign students is currently under discussion at several institutions. Both application fees and academic fees are involved. Most institutions have experienced significant increases in the number of foreign applicants in recent years. The cost of the evaluation process for their applicants is very high as compared to domestic applicants. Consequently some institutions are studying the full impact of differential application fees. No institutions represented at this session indicated they charged foreign students higher admission tuition or academic fees at the present time however several indicated an interest in such an approach.

Report on the Council of Graduate Schools—Graduate Record Examinations Board 1978-79 Survey of Graduate Enrollment

Part I

Bernard V. Khoury
Program Director, GRE
Educational Testing Service
November 29, 1978

Introduction

As a result of the difficulty of obtaining accurate information about graduate enrollments, and particularly about trends in enrollments, the GRE Board and the Council of Graduate Schools began eight years ago to conduct an annual series of surveys of enrollment of the membership of the Council of Graduate Schools in the United States. The Council membership consists of some 360 graduate institutions who grant either the master's or doctorate as the highest degree. The members of the Council grant 99% of the earned doctorates and 85% of the master's degrees awarded.

This year's survey, like those of previous years, is divided into two sections, the first of which was distributed in the early fall of 1978 with a request that results be returned no later than November 1, 1978. This report provides the results of the first questionnaire mailing. The results of the second questionnaire mailing will be available early in the spring of 1979.

Sample Description

Survey questionnaires were sent to each of the 360 graduate schools which are members of CGS. A total of 298 questionnaires were returned for an 83% response rate, an indication of the continued cooperation of member graduate schools. Since the primary purpose of the questionnaire is to develop comparative data between 1977 and 1978, responses to questions were included in the analysis only when data were supplied for both years. Thus, the effective response rate per question will vary from a high of 83% for the overall sample to a low of 70% for the question concerning fellowships. While this variability is probably to be expected, it does make comparisons across some questions of restricted value.

Comparison of Usable Sample and Base Population

	Base		*Usable Sample*		*% (sample of each population subgroup)*
	Number	*Percent*	*Number*	*Percent*	
Total Institutions					
Public	243	67%	204	69%	84%
Private	117	33%	93	31%	79%
Total	360	100%	297	100%	83%
Master's Highest Degree					
Public	90	25%	69	23%	77%
Private	27	8%	21	7%	78%
Sub-total	117	33%	90	30%	77%
Ph.D. Highest Degree					
Public	153	43%	135	46%	88%
Private	90	25%	72	24%	80%
Sub-total	243	68%	207	70%	85%

Continued care should be exercised in attempting to compare results of this year's survey with published results of last year's survey insofar as 1977 data reported in the current survey may differ from 1977 data reported last year for several reasons. First, although the questionnaires and definitions remain unchanged from last year's survey, the actual number of institutions responding decreased by 2% and the specific institutions responding in 1978 were not always identical to those responding in 1977. Second, some institutions noted that the data for 1977 which they were able to provide for this year's survey were different from, and better than, the 1977 data which they provided last year. Finally, there was a decrease both in the number of respondents and in the response rate (83% this year as compared with 85% last year). Despite these limitations, the overall obtained sample (i.e., those submitting usable questionnaires on time) is highly representative of the total CGS population.

Comparisons of number and percentages of the available population and sample are shown above; it should be noted that "Master's Highest

Degree" refers, throughout this report, only to those institutions for which the master's degree is, in fact, the highest degree awarded. Data for these institutions do not reflect master's degrees offered by institutions which also offer the doctorate.

The percentages shown in the table on page 274—and in Tables 1 through 8 at the end of this report—show response rate based on the number of institutions in CGS; e.g., the 298 institutions providing responses to this survey represent 83% of the CGS institutions and an 83% response rate is noted. Since the sample of institutions with usable data becomes less complete as the complexity of the questions or the difficulty of obtaining the data increases, the number of institutions providing usable data and the response rate that number represents are given for each question in the data presentation.

In addition, in order to provide an indication of the representativeness of these data the proportion of total CGS graduate school enrollment which the responding institutions represent are provided in a footnote to each table. Based upon the results of this year's survey, combined with additional data from the *Graduate Programs and Admissions Manual*, one may estimate the 1977 total graduate school enrollment for CGS members at approximately 830,000. Using this estimate, it is then possible to report that the 298 institutions which responded to this year's survey represent an 83% response rate (based on percentage of CGS institutions) and also accounted for approximately 82% of the 1977 total graduate enrollment at CGS institutions. This latter figure is created by taking the 1977 total enrollment reported this year (678,944) and dividing by 830,000. For subsequent questions, a similar computation has been carried out, removing from the 678,944 the reported total graduate enrollment of each institution which failed to provide a usable response to the question.

Results

The results of the survey are displayed in Tables 1 through 8. The tables present the number of respondents with usable data to each question (i.e., data for both years and for all parts of the question), the percentage that number represents of the total group or of the subgroup, e.g., public, the total number of students reported each year and the percentage change from 1977 to 1978. Most data are presented by public, private, and total. In addition, Tables 1 through 4 also present data for institutions classified by means of the Educational Directory, Part 3, in terms of the highest degree awarded. These categories are: Public—Master's Highest; Private—Master's Highest; Public—Doctorate Highest; and Private—Doctorate Highest. This additional breakdown was not applied to later questions because it was not felt to be particularly important or because the differences were too small to affect the overall conclusions.

Finally, all data were summarized by size of the responding graduate school, although these summaries do not appear in the tables presented. This report bases size categories on quartile ranges by institutional type. Thus, each size category—ranging from "1" for the smallest institutions to "4" for the largest institutions—will contain approximately 25% of all institutions of one type, facilitating meaningful comparisons of institutions by size. Size categories used in this report, by institutional type, are shown on this page; results based on these size categories are noted in the following discussion, where appropriate.

Total Graduate School Enrollment for Size Categories, by Institutional Type
(Each size category contains approximately 25% of all institutions of that institutional type)

	(smallest) *Category 1*	*Category 2*	*Category 3*	*(largest)* *Category 4*
Public-Master's Highest Degree	0-700	701-1300	1301-2100	over 2100
Private-Master's Highest Degree	0-300	301-600	601-800	over 800
Public-Ph.D. Highest Degree	0-1300	1301-2600	2601-4300	over 4300
Private-Ph.D. Highest Degree	0-800	801-1300	1301-2300	over 2300

Discussion

Table 1—Total enrollment this year decreased slightly for the institutions reporting. In total, the decrease was 2,564, a 0.4% decrease below last year. The only increase was at the public Ph.D. degree institutions (+0.7%), where increased enrollment occurred in all size categories except category 2.

Table 2—Total first time enrollments have also decreased (2.4%). The largest decline (4.1%) occurred in the private Ph.D. institutions. The only increase (4.1%) was found in the private master's degree institutions.

Table 3—There was a decline in applications received (1.6%) across all types of institutions, with the largest decline occurring in private Ph.D. institutions (4.4%). Applications increased at the smallest master's level institutions, while they decreased significantly in the largest (category 4) size categories at all institutional types.

Table 4—The number of graduate assistants (service required) increased in public institutions (2.5%) and decreased in private institutions (1.1%). The public institutions showed assistantship growth across all size institutions.

Table 5—The number of graduate fellows (non-service required) declined by 4.3% in private institutions and rose by 0.8% in public institutions, for a net decline of 1.6% below last year.

Table 6—In the Ph.D. institutions full-time enrollment has increased while part-time enrollment has decreased compared to last year. This shift, although small, is a departure from recent years in which the percentage of part-time students had been increasing. The trend to higher proportions of full-time students this year is particularly true among the largest public Ph.D. institutions. Among master's institutions the growth in the proportion of part-time students across all institutional sizes and control continues as has been noted in previous surveys.

Table 7—The total number of master's degrees awarded has decreased by 2.8%. The decrease in master's degrees is characteristic of public institutions across all sizes and levels. The decreases are less uniform among private institutions of various sizes.

Table 8—Consistent with prior years the final table shows a decline (4.0%) in the total number of doctoral degrees awarded at both public (4.2%) and private (3.8%) institutions. These decreases in doctoral degrees occurred across all institutional sizes. This downward trend in earned doctorates is a continuation of the results of recent surveys in this series.

Conclusions

Continued retrenchment is an appropriate summary description of the results of this year's graduate enrollment survey. Decreases are noted in most of the overall statistics compiled in this report: total enrollments, first-time enrollments, applications received, fellowships awarded, master's degrees awarded, and doctorate degrees earned have all declined. Only the number of assistantships and the proportion of full-time students has increased.

With respect to institutional control, public institutions suffered larger percentage declines than private institutions in master's and doctorate degrees awarded, while private institutions suffered larger percentage declines than public institutions in total enrollments, first-time enrollments, applications received, and assistantships and fellowships awarded.

The invaluable assistance of Ms. Virginia Cox in compiling and analyzing the results of this survey is gratefully acknowledged.

TABLE 1

Total Graduate School Enrollment by Type of Institution*

	Number	*%***	*1977*	*1978*	*% Change*
Master's Highest					
Public	69	77%	125,494	121,354	3.3% decrease
Private	21	78%	15,626	15,495	0.8% decrease
Sub-Total	90	77%	141,120	136,849	3.0% decrease
Ph.D. Highest					
Public	135	88%	414,210	417,083	0.7% increase
Private	72	80%	123,614	122,448	0.9% decrease
Sub-Total	207	85%	537,824	539,531	0.3% increase
Total Institutions					
Public	204	84%	539,704	538,437	0.2% decrease
Private	93	79%	139,240	137,943	0.9% decrease
Total	297	83%***	678,944	676,380	0.4% decrease

*For purposes of this survey, institutions were asked to include all students considered as registered in the graduate school, including education, engineering, social work, medical and business programs leading to MA/MS or Ph.D., Ed.D., or other doctorates.

**Percentage figures are the number of institutions responding to this question as a percentage of the number available in the total group. For example, 69 Public Master's Highest Degree institutions responded out of a possible 90 such institutions in the CGS membership for a 77% response rate for that group of institutions.

***Based on the computations described under Sample Description on page 274, the 297 institutions responding to this question represent 83% of the CGS institutions and accounted for approximately 82% of the 1977 total student enrollment at CGS institutions.

TABLE 2

First-Time Graduate Enrollment by Type of Institution

	Number	*%*	*1977*	*1978*	*% Change*
Master's Highest					
Public	60	67%	28,432	27,599	2.9% decrease
Private	21	78%	4,968	5,173	4.1% increase
Sub-Total	81	69%	33,400	32,772	1.9% decrease
Ph.D. Highest					
Public	127	83%	100,956	98,947	2.0% decrease
Private	68	76%	36,308	34,819	4.1% decrease
Sub-Total	195	80%	137,264	133,766	2.5% decrease
Total Institutions					
Public	187	77%	129,388	126,546	2.2% decrease
Private	89	76%	41,276	39,992	3.1% decrease
Total	276	77%*	170,664	166,538	2.4% decrease

*Based on the computations described under Sample Description on page 274, the 276 institutions responding to this question represent 77% of the CGS institutions and accounted for approximately 75% of the 1977 total student enrollment at CGS institutions.

TABLE 3

Number of Applications for Graduate Study

	Number	*%*	*1977*	*1978*	*% Change*
Master's Highest					
Public	57	63%	62,277	60,936	2.2% decrease
Private	18	67%	8,852	8,790	0.7% decrease
Sub-Total	75	64%	71,129	69,726	2.0% decrease
Ph.D. Highest					
Public	120	78%	326,590	325,367	0.4% decrease
Private	67	74%	132,995	127,098	4.4% decrease
Sub-Total	187	77%	459,585	452,465	1.5% decrease
Total Institutions					
Public	177	73%	388,867	386,303	0.7% decrease
Private	85	73%	141,847	135,888	4.2% decrease
Total	262	73%*	530,714	522,191	1.6% decrease

*Based on the computations described under Sample Description on page 274, the 262 institutions responding to this question represent 73% of the CGS institutions and accounted for approximately 72% of the 1977 total student enrollment at CGS institutions.

TABLE 4

Number of Graduate Assistants (Service Required)

	Number	*%*	*1977*	*1978*	*% Change*
Master's Highest					
Public	64	71%	5,374	5,466	1.7% increase
Private	20	74%	338	330	2.4% decrease
Sub-Total	84	72%	5,712	5,796	1.5% increase
Ph.D. Highest					
Public	119	78%	75,371	77,294	2.6% increase
Private	63	70%	17,241	17,058	1.1% decrease
Sub-Total	182	75%	92,612	94,352	1.9% increase
Total Institutions					
Public	183	75%	80,745	82,760	2.5% increase
Private	83	71%	17,579	17,388	1.1% decrease
Total	266	74%*	98,324	100,148	1.9% increase

*Based on the computations described under Sample Description on page 274, the 266 institutions responding to this question represent 74% of the CGS institutions and accounted for approximately 69% of the 1977 total student enrollment at CGS institutions.

TABLE 5

Number of Graduate Fellows (Nonservice Required)

	Number	*%*	*1977*	*1978*	*% Change*
Public	172	71%	11,829	11,927	0.8% increase
Private	81	69%	10,261	9,820	4.3% decrease
Total	253	70%*	22,090	21,747	1.6% decrease

TABLE 6

*Full-time – Part-time** Total Enrollment*

	Number	%	1977 Full-time Number	%	Part-time Number	%	1978 Full-time Number	%	Part-time Number	%
Master's Highest	86	74%	27,563	20%	107,833	80%	24,794	19%	106,733	81%
Ph.D. Highest	193	79%	219,169	45%	264,283	55%	226,729	47%	256,147	53%
Total	279	78%***	246,732	40%	372,116	60%	251,523	41%	362,880	59%

*Based on the computations described under Sample Description on page 274, the 253 institutions responding to this question represent 70% of the CGS institutions and accounted for approximately 66% of the 1977 total student enrollment at CGS institutions.

**Institutions were directed to apply their own institutional definitions to "part-time" and "full-time."

***Based on the computations described under Sample Description on page 274, the 279 institutions responding to this question represent 78% of the CGS institutions and accounted for approximately 75% of the 1977 total student enrollment at CGS institutions.

TABLE 7

Number of Master's Degrees

	Number	%	1976-77	1977-78	% Change
Public	200	82%	131,226	126,456	3.6% decrease
Private	93	79%	34,719	34,767	0.1% increase
Total	293	81%*	165,945	161,223	2.8% decrease

*Based on the computations described under the Sample Description on page 274, the 293 institutions responding to this question represent 81% of the CGS institutions and accounted for approximately 80% of the 1977 total student enrollment at CGS institutions.

TABLE 8

Number of Ph.D. Degrees

	Number	%	1976-77	1977-78	% Change
Public	135	89%	17,093	16,383	4.2% decrease
Private	72	90%	6,816	6,559	3.8% decrease
Total	207	85%	23,909	22,942	4.0% decrease

*Based on the computations described under Sample Description on page 274, the 207 institutions responding to this question represent 85% of the CGS doctoral institutions.

Officers and Committees—1978

Board of Directors

Donald J. White (Chairman), Boston College
J. Chester McKee, Jr. (Past Chairman), Mississippi State University
Robert F. Kruh (Chairman-Elect), Kansas State University
Paul A. Albrecht (1980), Claremont Graduate School
Phyllis Pray Bober (1980), Bryn Mawr College
Earle L. Canfield (1979), Drake University
Beverly Cassara (1980), University of the District of Columbia
Bernard J. Downey (1978), Villanova University
Eastman N. Hatch (1979), Utah State University
J. Knox Jones, Jr. (1978), Texas Tech University
Oscar A. Rogers, Jr. (1979), Jackson State University
Daniel J. Zaffarano (1978), Iowa State University
Michael J. Pelczar, Jr. (ex officio), President, CGS

Plans & Policies Committee

Donald J. White, Boston College
Robert F. Kruh, Kansas State University
J. Chester McKee, Jr., Mississippi State University
Daniel J. Zaffarano, Iowa State University

Nominating Committee

Mary Ann Carroll, Chair
Giles T. Brown, California State University, Fullerton
Bernard J. Downey, Villanova University
J. Knox Jones, Texas Tech University
James Reeves, Tennessee State University

Program Committee for the Annual Meeting

Robert F. Kruh, Kansas State University, Chairman

Advisory Committee on the Gustave O. Arlt Award in the Humanities

Herbert Weisinger, State University of New York at Stony Brook

Committee on Governmental & Association Relations

J. Chester McKee, Jr., Mississippi State University, Chairman
Harry C. Allen, Jr., Clark University
Robert M. Bock, University of Wisconsin, Madison
Donald G. Herzberg, Georgetown University

Robert M. Johnson, Florida State University
Gaby Stuart, California State University, Los Angeles
John B. Turner, Massachusetts Institute of Technology

Program Committee for the Summer Workshop

George Karas, Iowa State University, Chairman
Eastman N. Hatch, Utah State University
H. Ray Hoops, University of Northern Iowa
Margaret Perry, University of Tennessee, Knoxville
Rudolph Schulz, University of Iowa

Committee on Membership

Frank J. Hilferty, Bridgewater State College, Chairman
Benjamin F. Hudson, Atlanta University
Rudolph W. Schulz, University of Iowa

Publications Committee

Jacob E. Cobb, Indiana State University, Chairman
Wendell Bragonier, Colorado State University
W. Dexter Whitehead, University of Virginia
S. D. Shirley Spragg, University of Rochester

Committee on International Graduate Education

Jules B. LaPidus, The Ohio State University, Chairman
Johnetta G. Davis, Howard University
Stirling H. Huntley, California Institute of Technology
William H. Macmillan, University of Alabama
Philip S. Schmidt, University of Texas at Austin
Kenneth R. Wadleigh, Massachusetts Institute of Technology

Task Forces

Task Force on Minority Graduate Education

Albert C. Yates, University of Cincinnati, Chairman
Beverly Cassara, University of the District of Columbia
Oscar A. Rogers, Jackson State University
Bernard Spolsky, University of New Mexico
Albert H. Yee, California State University, Long Beach

Task Force on the Non-Degree Student
Norman N. Durham, Oklahoma State University, Chairman
Mary Ann Carroll, Indiana State University

Hans J. Hillebrand, City University of New York
Anthony J. Moye, California State Universities & Colleges
Clarence G. Stuckwisch, University of Miami
Charles M. Woolf, Arizona State University

Task Force on Assessment of Quality of Masters Degree Programs

Bernard J. Downey, Villanova University, Chairman
James Ballowe, Bradley University
Giles T. Brown, California State University, Fullerton
Laurine Fitzgerald, University of Wisconsin—Oshkosh
Sam Webb, Georgia Institute of Technology
Robert Raymo, New York University

CGS REPRESENTATION IN OTHER ORGANIZATIONS

- American Council of Education
  - The Washington Higher Education Secretariat
  - Commission on Educational Credit
  - Higher Education Panel
  - Ad Hoc University Science Group (Federal Relations)
- American Association of Colleges
  - Advisory Committee, TRENDS 2000
- National Center of Higher Education Management Systems (NCHEMS)
- National Science Foundation
  - Advisory Group—Science Resources Surveys
- Graduate Record Examinations Board
- American Association of Universities
  - Ad Hoc Federal Relations Group (AAU, AGS, ACE, COGR, NASULGE, AAMC, CGS)
- Institute of International Education, Advisory Committee
- National Liaison Committee on Foreign Student Admission
- The African American Institute (AFGRAD)

THE COUNCIL OF GRADUATE SCHOOLS IN THE UNITED STATES
WASHINGTON, D.C.

STATEMENT OF INCOME AND EXPENSES
FOR THE PERIOD JANUARY 1, 1978, TO AUGUST 31, 1978

(Prepared by Wayne Kendrick & Company, Certified Public Accountants)

INCOME			
Dues			
1977		$ 1,200.00	
1978		129,200.00	$ 130,400.00
Interest			16,072.29
Sales of Publications			4,576.75
Administrative Fees from Consultations			6,900.00
TOTAL INCOME			$ 157,949.04
Deduct:			
EXPENSES			
Salaries		$ 64,566.72	
Employees' Benefits		10,401.92	
Payroll Taxes		3,527.63	
Rent		9,881.07	
Telephone		3,420.96	
Office Supplies and Expenses		1,100.16	
Postage and Mailing		2,934.12	
Printing and Duplicating (Including Publications)		10,264.86	
Dues		505.00	
Insurance		71.00	
Subscriptions and Publications		519.64	
Personal Property Taxes		52.62	
Bookkeeping Service		3,393.36	
Travel			
Staff	$ 2,892.89		
Committees	16,494.18	19,387.07	
Meetings			
Annual Meeting	$ 1,528.31		
Business and Committee	1,023.62		
Summer Workshop	1,385.61	3,937.54	
Furniture and Equipment		173.25	
Expenditures from Grants			
National Institutes of Health	$ 8,915.74		
National Science Foundation			
Refund of Unused Grant Funds	3,155.48		
Other	3,417.89	15,489.11	
TOTAL EXPENSES			149,626.03

EXCESS OF INCOME OVER EXPENSES			$ 8,323.01
OVER EXPENSES			
Deduct:			
Increase in Unreimbursed Consultation			
Expenses			
August 31, 1978		$ 11,249.50	
December 31, 1977		1,353.14	9,896.36
NET (DECREASE) IN CASH AND UNITED STATES TREASURY BILLS (Carried Forward)			$(1,573.35)
NET (DECREASE) IN CASH AND UNITED STATES TREASURY BILLS (Brought Forward)			$(1,573.35)
BALANCE JANUARY 1, 1978 (CASH AND UNITED STATES TREASURY BILLS			
Per Prior Audit Report			306,372.48
BALANCE AUGUST 31, 1978 (CASH AND UNITED STATES TREASURY BILLS)			$ 304,799.13
ACCOUNTED FOR AS FOLLOWS:			
Cash			
The Riggs National Bank of Washington, D.C. - Checking Account		$ 44,596.01	
Columbia Federal Savings and Loan Association - Savings Accounts (See Notes)		47,200.88	
National Permanent Federal Savings and Loan Association - Savings Account		10,059.91	
Petty Cash		50.00	
		$101,906.80	
United States Treasury Bills - At Cost			
$25,000.00, Due 10/19/78	$ 24,580.50		
60,000.00, Due 10/19/78	58,049.33		
125,000.00, Due 1/18/79	120,262.50	202,892.33	$ 304,799.13

NOTES: This statement was prepared on the cash receipts and disbursements basis.

The Constitution of the Council of Graduate Schools in the United States

1. Name

This organization shall be called the Council of Graduate Schools in the United States.

2. Purpose

The Council is established to provide graduate schools in the United States with a comprehensive and widely representative body through which to counsel and act together.

Its purpose is the improvement and advancement of graduate education. The purview of the Council includes all matters germane to this purpose. The Council shall act to examine needs, ascertain best practices and procedures, and render assistance as indicated; it may initiate research for the furthering of the purpose. It shall provide a forum for the consideration of problems and their solutions, and in meetings, conferences, and publications shall define needs and seek means of satisfying them in the best interests of graduate education throughout the country. In this function the Council may act in accordance with the needs of the times and particular situations to disseminate to the public, to institutions, to foundations, to the federal, state, and local governments, and other groups whose interest or support is deemed of concern, information relating to the needs of graduate education and the best manner of satisfying them.

In the analysis of graduate education, in the indication of desirable revision and further development, in the representation of needs and all other functions related to effecting its purpose, the Council not only shall be free to act as an initiating body, but it shall assume direct obligation for so doing.

3. Membership

Membership in the Council of Graduate Schools in the United States is open to those institutions of higher education in the United States which are significantly engaged in scholarship, graduate education, and the preparation of students for advanced degrees. In joining the Council of Graduate Schools in United States, a new member should be aware that the Council is devoted to excellence in graduate education as interpreted by occasional position statements outlining changing philosophies, policies, and procedures of graduate education. In addition, prospective members shall be approved to offer graduate work by the appropriate regional accrediting association and shall have awarded at least thirty master's degrees or ten doctoral degrees, or a combination thereof, in at least three distinct fields or disciplines within the three-year period immediately prior to the date of application. Each application for membership shall contain evidence as to these qualifications in a form perscribed in the Bylaws.

4. *Voting Power*

In all activities of the Council, each member institution shall have one vote.

More than one representative of any institution may attend the meeting of the Council, but the member's vote shall be cast by the individual designated as the principal representative of the member by the chief administrative officer of the member institution.

5. *Officers and Board of Directors*

The officers of the Council and the Board of Directors shall be a Chairman, a Chairman-Elect, and the immediate Past Chairman, each serving for a term of one year. In the absence of the Chairman, the Chairman-Elect shall be the presiding officer of the Board of Directors and the Council.

There shall be a Board of Directors of twelve voting members, composed of the Chairman, the Chairman-Elect, the Past Chairman and nine members-at-large. Three members-at-large shall be elected by the Council at each Annual Meeting for terms of three years each, beginning immediately after the Annual Meeting.

The Chairman-Elect, chosen by the Board of Directors from its own past or present membership, shall serve in that capacity for one year. The following year, he will assume the office of Chairman, and the following year, the office of Past Chairman.

Each voting member of the Board of Directors must be the principal representative of a member of the Council and none may serve for two consecutive full terms.

If the Chairman is unable to continue in office, the Chairman-Elect shall succeed immediately to the Chairmanship, and the Board of Directors shall choose a new Chairman-Elect.

Any vacancies occurring among the membership-at-large of the Board of Directors shall be filled by the Board of Directors until the next Annual

Meeting, at which time the Council shall elect a replacement for the balance of the term.

6. *Executive Officers*

The chief executive officer of the Council shall be a President, who shall be a salaried officer, appointed by the Board of Directors and serving at its pleasure. The President shall serve as an ex-officio member of the Board of Directors without a vote.

7. *Duties and Powers of the Board of Directors*

In addition to the duties and powers vested in the Board of Directors elsewhere in this Constitution, the Board of Directors may specifically employ such staff and establish such offices as may seem necessary; incorporate; undertake itself, or through its agents, to raise funds for the Council and to accept and expend monies for the Council; take initiative and act for the Council in all matters including matters of policy and public statement except where limited by this Constitution or by actions of the Council.

8. *Committees*

In addition to the Board of Directors, there shall be (1) a Nominating Committee, (2) a Committee on Membership, whose members shall not be members of the Board of Directors, and (3) such other standing committees as may be established by the Board of Directors.

Except for the Nominating Committee, all standing committees and ad hoc committees shall be appointed by the Chairman with the advice and consent of the Board of Directors.

The Nominating Committee shall consist of five members of whom three shall be elected each year by the Council at its annual meeting, and two shall be the members-at-large of the Board of Directors who are completing their terms. The Chairman shall be elected by the Committee.

At least sixty-one days before each annual meeting of the Council, the Nominating Committee shall propose to the members of the Council two nominees for each member-at-large position of the Board of Directors to be filled and three nominees for members of the Nominating Committee. These nominations shall be made only after suggestions accompanied by supporting vitae have been solicited from the membership-at-large.

The election will then be held by mail ballot and the nominees receiving the largest number of votes for the positions to be filled shall be declared elected.

9. Meetings

The Council shall hold an Annual Meeting at a time and place determined by the Board of Directors. The Council may meet at other times on call of the Board of Directors.

The Board of Directors shall be responsible for the agenda for meetings of the Council. Reports and proposals to be submitted for action by the Council shall be filed with the Board of Directors before they may be submitted for general discussion by the Council. No legitimate report or proposal may be blocked from presentation to the Council, but action on any proposal may not be taken until the Board of Directors has had an opportunity to make a recommendation.

In matters not provided for in this Constitution, parliamentary procedure shall be governed by Robert's Rules of Order, Revised.

10. Limitation of Powers

No act of the Council shall be held to control the policy or line of action of any member institution.

11. Dues

Membership dues shall be proposed by the Board of Directors and must be approved by the majority of the membership after due notice.

12. Amendments

Amendments to this Constitution may be proposed by the Board of Directors or by written petition of one-third of the members. However they originate, proposals for amendments shall be received by the Board of Directors and forwarded with recommendations to the members, in writing, at least ninety days before the meeting at which they are to be voted upon or before formal submission to the members for a mail ballot. To be adopted, proposed amendments must receive the approval of a two-thirds majority of the members voting at the announced meeting or on the designated mail ballot.

13. Bylaws

Bylaws may be established by the Board of Directors at any regular or special meeting, subject to ratification by a simple majority vote of the Council at the next Annual Meeting.

Bylaws

1. In conformity with Article 6 of the Constitution, the President of the Council of Graduate Schools in the United States shall be paid an annual salary to be determined by the Board of Directors plus such perquisites as may be necessary for the proper conduct of the office and such travel as may be deemed essential. The President is authorized to employ such additional personnel as is, in his judgment, necessary for the proper conduct of the office, to establish bank accounts in the name of the Council of Graduate Schools in the United States, and to draw checks and invest monies against the Council's account or accounts, subject to an annual audit of the books of the Council by a Certified Public Accountant and approval by the Board of Directors.

2. The Riggs National Bank of Washington, D.C., is hereby designated a depositary for the funds of this association and the said bank is hereby authorized and directed to pay checks and other orders for the payment of money drawn in the name of this association when signed by the President and the said shall not be required in any case, to make inquiry respecting the applications of any instrument executed in virtue of this resolution, or of the proceeds therefrom, nor be under any obligation to see in the application of such instruments of proceeds.

3. In the event of the dissolution of the Council of Graduate Schools, all then existing assets of the Council shall be distributed in equal parts to the institutions which will at the time be members of the Council.

4. After January 1, 1969, the fiscal year of the Council of Graduate Schools in the United States will correspond to the calendar year. (Prior to this date, the fiscal ran from April 1 through March 31.)

5. In the event of the death or disability of the President of the Council, the Chairman shall immediately call a meeting of the Board of Directors to select an Acting President, who shall assume the responsibilities of the President, as they are specified in Article 6 of the Constitution and in Bylaws 1 and 2, until the appointment of a new President.

6. Membership applicants responding to Section 3 of the Constitution are expected to furnish statements endorsed by the chief executive officer and the chief graduate officer of their institution. These statements should include information as to the following:

a) The institution's accreditation for graduate work as determined by the appropriate regional accrediting association.
b) The number of graduate degrees awarded in the three years immediately preceding the application for each applicable field or discipline in which graduate degrees are awarded.
c) A general description of the criteria used in determining faculty participation in graduate programs, i.e., the level of training and the scholarly/creative productivity of the faculty members in the institution's graduate program.
d) The degree of centrality of graduate education to the nature and purposes of the institution as evidenced by its budgetary commitment to graduate programs, the existence of special facilities or resources in specific support of graduate education, and, in the case of appointments, promotion and tenure, the degree of importance placed on faculty contributions to graduate and scholarly/creative work.
e) The extent of the institution's acceptance of existing Council policy statements setting forth standards for the organization of graduate study.

Procedural Policies

1. Annual meetings of the Council shall be held during or near the first week of December.
2. If a member resigns, it must reapply for admission in the normal way if it wishes to resume membership.
3. Membership or affiliation, with or without vote, of non-academic institutions, associations, or foundations is undesirable.
4. Institutions accepted to membership in any given year are required to pay prorated dues on a quarterly basis for that fiscal year.

The Council of Graduate Schools in the United States

Member Institutions

- Abilene Christian University
- Adelphi University
- Air Force Institute of Technology
- Alfred University
- *American University
- Andrews University
- Angelo State University
- Appalachian State University
- Arizona State University
- Arkansas State University
- Atlanta University
- Auburn University
- Austin Peay State University
- Ball State University
- Baylor College of Medicine
- Baylor University
- *Boston College
- Boston University
- Bowling Green State University
- Bradley University
- *Brandeis University
- Bridgewater State College
- Brigham Young University
- Brooklyn College of the City University of New York
- *Brown University
- *Bryn Mawr College
- *California Institute of Technology
- California State College, Bakersfield
- California State Polytechnic University, Pomona
- California State University, Chico
- California State University, Fresno
- California State University, Fullerton
- California State University, Hayward
- California State University, Long Beach
- California State University, Los Angeles
- California State University, Northridge
- California State University, Sacramento
- *Carnegie-Mellon University
- *Case Western Reserve University
- *Catholic University of America
- Central Michigan University
- Central Missouri State University
- Central Washington University
- Chicago State University
- The City College of the City University of New York
- The City University of New York
- *Claremont Graduate School
- *Clark University
- Clarkson College of Technology
- Clemson University
- Cleveland State University
- College of Medicine and Dentistry of New Jersey
- College of Saint Rose
- College of William and Mary
- Colorado School of Mines
- Colorado State University
- *Columbia University
- Connecticut College
- Coppin State College
- *Cornell University
- Creighton University
- Dartmouth College
- DePaul University
- Drake University
- Drexel University
- *Duke University

Duquesne University
East Carolina University
East Tennessee State University
East Texas State University
Eastern Illinois University
Eastern Kentucky University
Eastern Michigan University
Eastern Washington University
*Emory University
Emporia State University
Fisk University
Fitchburg State College
Florida Atlantic University
*Florida State University
*Fordham University
Fort Hays State University
Framingham State College
Gannon College
George Mason University
George Peabody College for Teachers
*George Washington University
*Georgetown University
Georgia Institute of Technology
Georgia Southern College
Georgia State University
Governors State University
Hahnemann Medical College and Hospital of Philadelphia
*Harvard University
Hebrew Union College
Hofstra University
Holy Names College
Howard University
Idaho State University
*Illinois Institute of Technology
Illinois State University
Immaculate Heart College
Indiana State University
Indiana University
*Indiana University of Pennsylvania
*Iowa State University
Jackson State University
James Madison University
John Carroll University
*Johns Hopkins University
*Kansas State University
Kent State University
Lamar University
*Lehigh University
Loma Linda University
*Louisiana State University
Louisiana State University Medical Center
Loyola College
Loyola Marymount University
*Loyola University of Chicago
Mankato State University
Marquette University
Marshall University
*Massachusetts Institute of Technology
McNeese State University
Medical College of Georgia
Medical College of Pennsylvania
Medical College of Wisconsin
Medical University of South Carolina
Memphis State University
Miami University
*Michigan State University
Michigan Technological University
Middle Tennessee State University
Midwestern State University
Mississippi College
Mississippi State University
Montana State University
Montclair State College
Morgan State University
Murray State University
Naval Postgraduate School

New Jersey Institute of Technology
New Mexico Institute of Mining and Technology
New Mexico State University
*New School for Social Research
*New York University
Niagara University
North Carolina A&T State University
North Carolina Central University
*North Carolina State University at Raleigh
North Dakota State University
North Texas State University
Northeast Louisiana University
Northeastern Illinois University
Northeastern University
Northern Illinois University
Northwestern State University of Louisiana
*Northwestern University
Nova University
Oakland University
*Ohio State University
Ohio University
*Oklahoma State University
Old Dominion University
*Oregon State University
Pace University
Pan American University
*Pennsylvania State University
Pepperdine University
Pittsburg State University
Polytechnic Institute of New York
Princeton University
Purdue University
Queens College of the City University of New York
Rensselear Polytechnic Institute
Rhode Island College
Rice University
Rockefeller University
Roosevelt University
Rutgers, The State University
St. Bonaventure University
St. Cloud State University
St. John's University
St. Louis University
St. Mary's University
Samford University
San Diego State University
San Francisco State University
San Jose State University
Sangamon State University
Seattle University
Seton Hall University
Shippensburg State College
South Dakota School of Mines & Technology
South Dakota State University
Southeast Missouri State University
Southern Illinois University at Carbondale
Southern Illinois University at Edwardsville
Southern Methodist University
Southern University and A&M College
Southwest Missouri State University
Southwest Texas State University
Stanford University
State University of New York at Albany
State University of New York at Binghamton
State University of New York at Buffalo
State University of New York-Downstate Medical Center
State University of New York at Stony Brook
State University of New York College at Fredonia

State University of New York College at Oneonta
Stephen F. Austin State University
Stetson University
Stevens Institute of Technology
*Syracuse University
*Temple University
Tennessee State University
Tennessee Technological University
*Texas A&M University
Texas Christian University
Texas Southern University
Texas Tech University
Texas Woman's University
Thomas Jefferson University
Towson State University
Trenton State College
Trinity University
Tufts University
*Tulane University
United States International University
Utah State University
*Vanderbilt University
Villanova University
Virginia Commonwealth University
*Virginia Polytechnic Institute
Virginia State College
Wagner College
Wake Forest University
*Washington State University
Washington University
Wayne State College
*Wayne State University
Wesleyan University
West Chester State College
West Texas State University
West Virginia College of Graduate Studies
*West Virginia University
Western Carolina University
Western Illinois University
Western Kentucky University
Western Michigan University
Western State College of Colorado
Western Washington University
Westfield State College
Wichita State University
Winthrop College
Worcester Polytechnic Institute
Worcester State College
Wright State University
Xavier University
*Yale University
Yeshiva University
Youngstown State University
University of Akron
*University of Alabama
University of Alabama in Birmingham
University of Alabama in Huntsville
*University of Arizona
University of Arkansas
University of Baltimore
University of Bridgeport
*University of California, Berkeley
University of California, Davis
University of California, Irvine
University of California, Los Angeles
University of California, Riverside
University of California, San Diego
University of California, Santa Barbara
University of Central Florida
*University of Chicago
*University of Cincinnati
*University of Colorado
University of Connecticut

University of Dayton
*University of Delaware
*University of Denver
University of Detroit
University of the District of Columbia
University of Evansville
*University of Florida
University of Georgia
University of Hawaii
University of Health Sciences, The Chicago Medical School
University of Houston
University of Idaho
University of Illinois at Chicago Circle
University of Illinois at the Medical Center
*University of Illinois at Urbana-Champaign
*University of Iowa
*University of Kansas
*University of Kentucky
University of Louisville
University of Lowell
University of Maine
*University of Maryland
University of Massachusetts
University of Miami
*University of Michigan
University of Minnesota
University of Mississippi
University of Missouri, Columbia
University of Missouri, Kansas City
University of Missouri, Rolla
University of Missouri, St. Louis
University of Montana
*University of Nebraska
University of Nebraska, Lincoln
University of Nevada
University of Nevada, Las Vegas
University of New Hampshire
University of New Haven
University of New Mexico
University of New Orleans
*University of North Carolina, Chapel Hill
University of North Carolina, Charlotte
University of North Carolina, Greensboro
*University of North Dakota
University of Northern Colorado
University of Northern Iowa
*University of Notre Dame
*University of Oklahoma
*University of Oregon
University of the Pacific
*University of Pennsylvania
*University of Pittsburgh
University of Rhode Island
University of Richmond
*University of Rochester
University of San Francisco
University of Santa Clara
University of Scranton
University of South Alabama
University of South Carolina
University of South Dakota
University of South Florida
*University of Southern California
*University of Southern Mississippi
University of Tennessee, Chattanooga
University of Tennessee, Knoxville
University of Tennessee, Martin
University of Tennessee Center for the Health Sciences
University of Texas at Arlington
*University of Texas at Austin
University of Texas at Dallas
University of Texas at El Paso
University of Texas at San Antonio

University of Texas Health Science Center, San Antonio
University of Texas Medical Branch, Galveston
University of Toledo
University of Tulsa
*University of Utah
University of Vermont
*University of Virginia
*University of Washington
*University of Wisconsin, Madison
University of Wisconsin, Milwaukee
University of Wisconsin, Oshkosh
University of Wisconsin, Stout
*University of Wyoming

---

*Founding institutions